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ORIGINAL ARTICLES.

A RÉSUMÉ OF MEDICAL HYPNOTISM.

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BY RANDELL HUNT, M.D.

SHREVEPORT, LA.

The wonderful and marvelous facts that have been evolved within the last twenty years through hypnotism, are such as to attract the attention of the most skeptical, and fill those who believe in and practice the science with veritable awe. Science, with its brilliant light of logic and truth, is rapidly dispelling the darkness of mystery and doubt, and men are no longer looking helplessly to the supernatural for the solution of a problem above their individual ken. They realize that all in nature is natural and subject to natural laws, and when a phenomenon can not be explained, readily admit that it is through their failure to comprehend those universal principles that govern the cosmos.

Educated people demand a little more of the scientist than mere arbitrary statement. They wish to know the reason of the faith that is in him, and rightly, for the scientist should meet the issue squarely, face to face, and in such manner that any sound mind can grasp the solution he offers. Finite mind needs finite reasoning and in this practical age the world wants demonstration, for it has the courage of its convictions and inductively refuses to accept anything upon revelation alone. Hypnotism, to be acceptable to the thinking world of today, must be brought from the realm of mystery, charlatanry and empiricism, and standing unflinchingly in the light of scientific investigation, in no particular be found wanting. Its history is almost connate with the history of the world, for we find evidences of spiritualism in Babylon; while in Israel the Witch of Endor conjured the shadows of the dead.

In the eighth book, chapter 2, of the "Antiquities of the Jews," Josephus says: "God enabled Solomon to learn that skill which expels demons, which is a science useful and sanative to men. He composed such incantations also by which distempers are alleviated. And he left behind him the manner of using exorcisms, by which they drive away demons so that they never return, and this method of cure is of great force unto this day, for I have seen a certain man of my own country whose name was Eleazar, releasing people that were demoniacal in the presence of Vespasian and his sons and his captains and the whole multitude of his soldiers. The manner of the cure was this: He put a ring that had a root of one of those sorts mentioned by Solomon to the nostrils of the demoniac, after which he drew out the demon through his nostrils; and when the man fell down immediately, he abjured him to return into him no more, making still mention of Solomon and reciting the incantations which he composed."

In the temple of Ceres there was a well at the bottom of which there was a mirror; in this the priests saw the faces of those who came to be cured.

For forty centuries hypnotism has been practiced in Egypt by taking a porcelain plate and drawing two triangles in it crossing each other, in the center writing a cabalistic word, which when gazed at steadily for some minutes produces trance. The Eber papyrus, in the history of Egyptian medicine 1552 years before Christ, gives the laying on of hands as part of the treatment of disease, and we see the same thing later in the cures of the Emperor Vespasian.

Hypnosis from fixation has been practiced for thousands of years by the Persian magi, the fakirs and yogis of India, and also in certain convents of the Greek church, notably the Omphalopsychics of Mount Athos, by gazing at the umbilicus.

The next revival of hypnotism, under the name of animal magnetism, was by Mesmer, who believed in a universal magnetic fluid, and gathered many patients about him in Paris. Greatrakes, in 1662, claimed to have had divine revelations to the effect that by the laying on of hands he could cure many diseases. This he succeeded in accomplishing and soon his fame became so great that people came to him from all directions. Gasner, an ex-monk, 100 years later, performed many miracles and at last settled in Regensburg where, by the aid of exorcism, he gained fame and at one time had as many as 10,000 patients. Abbot Faria spent many years in India and in 1815 taught that the cause of trance and somnambulism was due to forces in the subject, not in the magnetizer, and that sleep could not be produced against the subject's will.

To James Braid of Manchester, belongs the honor of not only doing much to clear hypnotism of its mysticism and of naming the science, but of hinting at its most important factor, suggestion.

In the hospital of La Salpêtrière in 1878, Charcot and his pupils began to demonstrate hypnotism, but neither he nor his pupils have as yet any very satisfactory theory to advance. In 1866 Liebault, the real and true father of the therapeutics of suggestion, wrote a book on the subject, but it remained little known and the author was laughed at by his confrères. Professor Bernheim of Nancy, adopted Liebault's views and a great rivalry took place between him and Charcot and to this day the rivalry continues, though Nancy is gaining ground.

It was not until 1893 that a working hypothesis was formulated for the scientific demonstration of hypnotism. Like the flash of a meteor the brilliant genius of Hudson burst forth and gave to the world light in the logical presentation of one of its fundamental laws. His theory of the duality of mind is so clear that I shall employ it in this paper, and for the sake of explanation call, as he does, one phase of mind objective, with its seat in the upper brain and the other sub-

jective and located in the lower brain. The objective mind from its post of observation in the cerebrum, takes cognizance of the objective world through the media of the five physical senses, is under the control of reason, and develops what we know as common sense. This is the mind we are using at this moment, the mind we instruct at school, inform and polish by travel and in a thousand ways teach, the mind of the scientist and scholar. In normal man it is not controlled against reason by the suggestions of another, for it reasons both inductively and deductively and refuses to accept anything in opposition to achieved results.

The subjective mind, that of the lower brain (pons, medulla and cord) perceives, not through the physical senses, but by intuition, is the seat of the imagination, of memory, and, as is proven through the phenomena of hypnotism, controls the functions of the body. This is the mind whose ascendancy gives us the musician, the poet, the artist in any line, and when "exquisitely balanced" with the objective mind, as Mr. Hudson so beautifully shows us, a Shakespeare. That the subjective mind is always amenable to suggestion is the law that Mr. Hudson demonstrated to us so clearly.

To make the difference between the two minds plain I will give this illustration: Blind Tom had no objective force, but if Von Bulow or any other great musician played in his presence a most intricate and difficult composition, Tom could sit down and without trouble reproduce the whole. From this we see that perfect memory is a factor in the grand aggregate of the subjective faculties, while mere recollection and not true memory it is that belongs to the objective faculties.

The charge so commonly made by the uninformed that crime and immorality may result from improper suggestion from evil-minded operators, is met by the statement, fully proved through satisfactory experiment, that strongest of all suggestions is auto-suggestion. The suggestion of a crime is rendered abortive by the instinct of self-preservation acting through auto-suggestion, while the suggestion of immoral or indecent action is met by the counter auto-suggestion arising from strong convictions of right and the habits of a lifetime. To a really pure hearted, modest woman virtue and honor are more than mere existence, aye, they are divine glory and constitute her greatest ideality to man, and the insistence of an operator upon a suggestion opposed by auto-suggestion would result in hysterical distress and a speedy restoration to consciousness.

Anatomy and physiology prove the duality of mind, for Surgeon-General Hammond in a paper entitled, "The Brain not the Sole Organ of Mind," relates how he removed the brain of a frog and after waiting for the shock to pass, put it in water, when it immediately began to swim. He placed his hand so as to stop it and its efforts ceased; taking away his hand, it again commenced to swim. Pflüger removed the entire brain of a frog and applied acetic acid to the thigh over the inner condyle. The animal immediately rubbed the spot with the foot of the same side, making a voluntary movement and showing his appreciation of the locality of the irritation. The foot was then amputated and the acid was again applied, when the frog made an ineffectual effort with the amputated member and failing after a few movements, rubbed the irritation with the other foot. This experiment, with its demonstration of sensation and volition, is certified to by Prof. Austin Flint, who says he has often successfully produced the same phenomenon.

"In certain monsters born without a brain, or with important parts of this organ absent, we have interesting examples of the persistence of instinct." "Syme describes one of these beings which lived for six months. Though very feeble it had the faculty of sucking and the several functions of the body appeared to be well performed. Its eyes clearly perceived the light and during the night it cried if the candle was allowed to go out. After death the cranium was opened and there was found to be an entire absence of the cerebrum, the place of which was occupied by a quantity of serous fluid contained in the arachnoid." "Ollivier d'Angers describes a monster of the female sex which lived twenty hours. It cried and could suck and swallow. There was no brain, but the spinal cord and medulla oblongata were well developed." "Saviard relates the particulars of a case in which there was no cerebrum, cerebellum, or any other intracranial ganglion. Yet this being opened and shut its eyes, cried, sucked and even ate broth. It lived four days. Some of these movements were reflex, but others were clearly instinctive and adapted to the preservation of life." "But all these instances as well as experiments referred to as having been performed on lower animals, show that instinct does not reside in the brain."

Methods employed to produce hypnosis vary with each individual hypnotizer, though all use fixation with or without suggestion.

Mesmer generally sat opposite his patient, stared him in the eyes and held his hands for ten minutes, then made fourteen or fifteen gentle passes over his head, chest and body; but later on in the height of his triumph, when all fashionable Paris came to him, he lessened his labors by using magnetized tables and the baquet.

Braid fixed the attention on a bright object situated about three inches above the root of the nose, which caused the eyes to converge and the muscles to soon tire.

Charcot has modified Braid's method by placing the piece of glass gazed at near the bridge of the nose and suddenly striking a loud gong which causes catalepsy. But as Dr. Tuckey remarks, "Such sleep is analogous to that shock produced in waking moments by sudden fright, which paralyzes and transfixes with terror."

Suggestion, as employed at Nancy, acts as a sedative to the brain and softly woos a condition analogous to natural slumber. The person hypnotized is placed on a bed or in a large chair, told to think only of going to sleep, to be passive, not to move, and to look the hypnotizer steadily in the eyes, while the following formula is repeated: "Your eyelids are growing heavy, your eyes begin to wink, you can not see distinctly, you are growing so sleepy your eyelids are almost stuck together, a torpor steals all over your body, your eyes are closed, you are sound asleep, you can not feel anything, you can not move your arms or legs, you are sound asleep. Sleep, sleep, sleep." By this time the patient is generally hypnotized; but in case he is not, continue to vary the suggestion and success will usually follow.

As passivity is an indispensable factor to successful hypnotization, it follows that an unwilling subject is an impossibility. Advise hypnotism when indicated

and wait the patient's full and eager consent. By taking this course success will invariably follow and the practitioner will avoid the delay, worry and failure that will inevitably result from the perversity of an ignorant and stubborn patient.

Classification of the stages or degrees of hypnotism vary, but for the sake of convenience and brevity four shall be employed, viz.: Suggestion without sleep, light sleep, profound sleep and somnambulism.

Suggestion without sleep is a wonderful illustration of the power of the mind over the body and shows that through imagination and mental concentration every action and sensation can be controlled. A few rapid passes for psychic effect will sometimes, in the most susceptible, produce loss of sensation in the arm, hand or face and, in like manner, a catalepsy of any limb. There is no loss of individuality and though the patient may be unable to open the eyes, he will say that he can not understand his inability to do so.

In the second degree there is light sleep and general muscular relaxation; the eyes remain closed and the patient not only hears the voice of the hypnotizer, but any conversation within his hearing and, as a rule, remembers all.

Profound sleep is characterized by catalepsy. If the arm is lifted it remains in the position in which it is placed and while the voice of the operator is heard and remembered, conscious relationship with others is only obtained by verbal suggestion.

Somnambulism is marked by complete loss of consciousness of the outside world and, though suggestion is obeyed, there is no recollection of anything that happens during sleep. Some curious physiologic phenomena have been observed by those who practice medical hypnotism, such as increased circulation, respiration and muscular rigidity, though the two former disappear in a short time and therefore may be ascribed to excitement. Through suggestion circulation can be signally affected and by a mere word of command the cardiac function so influenced as to notably increase or decrease its pulsations. Suggestion also affects the temperature and the vasomotor system. In certain cases red spots and even blisters can be made to appear on the arm, chest, or any part of the body, by using a magnet, piece of paper, or a coin, and intimating the result desired.

Hypnotism will materially increase our knowledge of the functions of the brain, for the condition is entirely psychic and can not as yet be explained by physiology. Tucket quotes Brown-Sequard as saying that when one cerebral center or function is used to excess the others become, for the time being, paralyzed or inhibited and this is particularly true in the induction of hypnotic sleep, for the mind is then engrossed with one idea, and the eyes being fixed on a bright object soon cease to perceive it and the brain is consequently left in a state of vacuity. Dr. Barwise considers the condition brought about by mental and visual tumult and by cerebral anemia, the throwing back of the head interfering with circulation and producing a condition analogous to natural sleep.

Bernheim's views are more in accord with my limited experience. He thinks it due to the fixation of vision and the power of suggestion, particularly the latter; for many persons are easily hypnotized without assuming an unnatural posture, or even a fixation of gaze. In fact, it is nothing but a certain mental state in which the patient is susceptible to suggestion.

To obtain success in hypnotic treatment it is most important to impress the mind of the patient with its great and lasting power to produce effects. Dr. Moll assures us that any patient who goes to Lourdes with the faith of a good Roman Catholic meets a far different result than he who goes without faith. Under ordinary circumstances it is impossible for the practitioner to engender such belief, but it becomes easy with the aid of hypnotism to place the subjective entity in a condition of receptivity and faith.

The diseases that yield most readily to therapeutic suggestion are the following: Chronic alcoholism, tobacco habit, morbid delusions, hypochondriasis, bad habits, neurasthenia, insomnia, megrim, epilepsy, functional paralysis, hystero-epilepsy, writer's cramp, stammering, chorea and menstrual irregularities. "Dr. Björmstròm of Stockholm asserts that from 1850 to 1860 hypnotism was used on a large scale by Dr. Esdaile, head surgeon at the hospital at Calcutta. In six years he performed 600 operations on hypnotized Hindoos and a committee of surgeons and physicians, appointed by the Indian government, testified to his great success, which was chiefly derived from the fact that the most difficult operations could usually be made without a sign of pain from the patients."

Many interesting cases treated and cured by hypnotism could be related, but as the scope of this paper will not permit it, I shall have to be satisfied with calling your attention to such names as Dr. Gerald Yeo the physiologist, Professor Bernheim of Nancy, Professor Charcot of La Salpêtrière, Voisin, Wetterstrand, Björmstròm, Velpeau, Dumontpallier of Hotel Dieu, Richet of Paris, Tuckey of London and Albert Moll of Berlin.

In October, 1895, Dr. T. E. Schumpert, surgeon of the Charity Hospital of Shreveport, in the presence of Dr. J. F. Griffin of the same city, operated upon Allen Coates, age 53, suffering from chronic ulcer of the leg. The ulcer was curetted and skin-grafted under hypnosis without pain to the patient. He also performed circumcision on John S. and George Fields under hypnosis without causing pain and without memory, when they awakened, of what had been done.

The following is an extract from some notes handed me by Dr. T. G. Ford of Shreveport: "My experience with hypnotism, although limited, has been a happy one, using it upon one case of nausea from pregnancy with success, three cases of sick headache with relief, and one aggravated case of hysteria. In the latter I used almost every anodyne without benefit and at last resorted to suggestion, which acted most atisfactorily, and I now consider the condition of my patient much improved under its use."

The following recital of some of my own experience with hypnotism is presented to you with hesitancy, owing to its very limited scope, and only in the hope that in the event of any among you being without personal experience, it may serve to encourage you to try this most powerful and beautiful therapeutic agent. Some time ago a lady suffering from an attack of megrim sent for me and being afraid of contracting the morphine habit, she implored me not to give her an opiate, a request I respected. I then stated the benefits to be derived from hypnotism and as she was eager and willing, catalepsy was soon induced and suggesting that the pain was gone and

would not return, in a few minutes I had the pleasure of arousing her free from all pain. On another occasion a young lady came to my home office suffering from acute ovarian neuralgia and in the presence of my wife I hypnotized her and in four minutes she left smiling and well.

George Anderson, negro, aged 35 years, had facial neuralgia and had undergone agony for three weeks, in spite of medical treatment administered by one of our best physicians. Knowing the excellent ability of his former doctor and feeling that the treatment could not be improved upon, I urged him to let me produce hypnosis and, at last consenting, in a few minutes he was entirely cured.

In September I was called in consultation to see a woman who had been sick in bed for three months with hystero-epilepsy, and the week preceding my visit she had had nine seizures. After a careful examination the ovaries were found painful to touch and very much congested, so much so that the examination induced an attack, during which I succeeded in hypnotizing her and affirmed in a loud tone that all pain had passed away and that she would have no more trouble, but in the morning would be sitting up and would assure her physician of her great improvement and her certainty of soon being entirely well. A few weeks later I met the doctor and he told me that all had happened as I suggested and that she had an uninterrupted and extraordinarily rapid recovery.

In January of this present year there came to me a young woman addicted to the morphin habit, taking, according to her own statement which I afterward verified, eight grains daily. I at once placed her upon a mixture containing strychnia, caffein and cinchona, giving it every four hours and decreasing the morphia so as to have her off the drug in two weeks. For the next four weeks I continued the mixture, giving an occasional dose of phosphate of codein, and whenever great depression occurred, or any nervous pain, I would hypnotize her and obtain instant amelioration. One interesting feature of this case was that the diarrhea which always follows the withdrawal of the drug, and often proves so troublesome, was absolutely and entirely controlled by therapeutic suggestion. I have also the gratification of informing the Association that the patient is now well and in excellent spirits.

I have also found hypnotism successful in the following diseases: Intercostal neuralgia of eight years' standing, abolishing pain, increasing menstrual flow, filling and crowning teeth, dipsomania and chorea.

Before I close I should like to recall to the minds of my brother physicians the struggle that vaccination had to undergo before it was admitted as a reliable prophylactic agent; that it has not been long since electricity was taken from the hands of empirics and charlatans and that massage was ridiculed and laughed at, but at last, in spite of conservatism and inexperience, behold their triumph.

Nearly every village in Germany has one regular practitioner who, in addition to regular practice, employs the science of suggestion. Only a few months ago the Illinois Medical College appointed a chair of psychiatry and hypnotism in its curriculum, and less than three weeks ago an arm was amputated under hypnosis in the largest hospital in Baltimore.

The following preamble and resolutions were agreed to at the first First International Congress of Physicians and Jurists on Hypnotism held in Paris, 1889:

WHEREAS, This Congress recognizes the danger of public exhibitions of magnetism and hypnotism, and deeming that the therapeutic application of hypnotism has become a branch of the science of medicine, that its official teaching is the province of psychiatry, votes the following resolutions:

Resolved, Public exhibitions of hypnotism and magnetism should be forbidden by the administrative authorities in the interest of public hygiene and public morals.

Resolved, The employment of hypnotism as a curative agent should be subject to the laws and restrictions which regulate medical practice generally.

Resolved, It is desirable that the study of hypnotism and of its therapeutic application be introduced into the curriculum of medical sciences.

The advice of this Congress is not to be disregarded, for while the morally pure are safe from error, there is a large mass of humanity whose ethical nature is an unknown quantity and with a moral equilibrium that might easily be disturbed by adverse or criminal suggestion. Such being the case, it at once becomes imperative that proper legislation be enacted for the protection of such people and that this powerful agent be taken out of the hands of charlatans and empirics. Hypnotism used as a therapeutic measure is commendable, but care should be taken that no suggestion be made except relating to the cure desired, for inadvertent and unscientific suggestion when repeated daily for a great length of time, results not only in auto-hypnosis, but also in lasting hallucinations. These dangers, however, are easily avoided by judicious and quieting assertions and by never giving to the hypnotized subject any suggestion other than one necessary for his cure. If this advice be followed, Professor Bernheim and Prof. R. Von Kraft-Ebing assure us that no mental or physical detriment can result and that only good can come from medical hypnotism and therapeutic suggestion.

HOW THE ESTABLISHMENT OF A PERMANENT CENSUS BUREAU WILL IMPROVE THE VITAL STATISTICS OF THE UNITED STATES.

BY CRESSY L. WILBUR, M.D.

DIVISION OF VITAL STATISTICS, DEPARTMENT OF STATE, LANSING, MICH.

The establishment of a permanent census bureau has long been advocated by those most familiar with the numerous practical defects of our antiquated census system, both on grounds of greater economy and of improved results. Under a joint resolution of the first session of the present Congress, Hon. Carroll D. Wright, United States Commissioner of Labor, was directed to make a report on the advisability of placing the preparations for the census of 1900 upon a permanent basis, and the results of his labor are now before Congress in the form of a "Bill to provide for a permanent census service."

The bill contains provision for an enumeration of the population at the quinquennial periods intermediate between the present decennial enumerations, thus making general the means of verifying our knowledge of the population of the country every five years. It is unnecessary to point out how indispensable such frequent censuses are for the computation of accurate vital rates. All rates for intercensal years are based upon estimated populations, and when the estimation is continued for seven, or eight, or nine years after an official census, deductions based thereon may become entirely misleading. Indeed, so evident had the too infrequent character of our National cen-

suses become, that many of the States have already established censuses of their own in order to obtain data at quinquennial periods.

It was not my intention, however, to dwell upon the commendable features in the general census bill proper, but rather to call attention to the special provisions relating to the very important subject of vital statistics. The text of the bill as originally reported to Congress[1] is as follows:

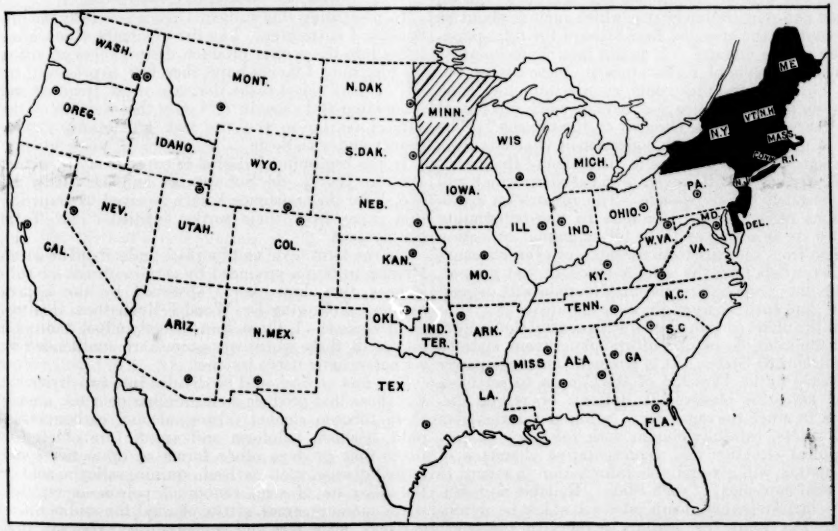
"There shall be a collection of statistics of deaths and of births for the year 1900, and annually thereafter, the data for which shall be obtained from the registration records of those States and municipalities possessing such records. At the time of the decennial enumeration of the population such data may be obtained from representative localities not having such records, at the discretion of the Director of the Census."

Upon this Col. Wright comments as follows:

"The collection of vital statistics every ten years, as now carried on, does not furnish material of value commensurate with the cost. The reliance of the decennial censuses has been upon the data collected from those States and municipalities having a registration system—that is, a compulsory system—under which physicians and others must make returns of births and deaths, and clergymen of marriages, the municipal authorities in States having a registration system making returns to the State. These are the only valuable vital statistics in the Federal census. All others, gathered from the people themselves by means of questions on the population schedules, are of no particular value for scientific purposes. When it is understood that the most accurate statistics we have in this country are from 5 to 10 per cent. away from the truth, it seems a useless expenditure of money and a needless irritation of the people to tax the enumerators with questions relating to births, deaths and marriages. Again, the value of vital statistics is increased more than tenfold by having them collected annually. It would be comparatively an inexpensive matter to collate the vital statistics of the United States, so far as registration States and municipalities are concerned, from the reports of such States and municipalities. By the adoption of such a system those States not having a registration system would gradually adopt something of the kind; so the bill under consideration authorizes the Director of the Census to collect vital statistics from representative localities in parts of the country not having a registration system. Ultimately under this provision the whole country would come into line with the States already having their registration provided for."

[1] Senate Executive Document No. 5, Fifty-fourth Congress, Second Session.

The United States may be conveniently divided for purposes of vital statistics, as under the last census, into registration and non-registration States. The assured registration States, comprising all of the New England States, New York, New Jersey and Delaware, occupy a comparatively small portion of the territory of the Republic (about 4 per cent.), although nearly one-fifth of the entire population of the country is contained in them. All of the other States of the Union are included in the non-registration class, although several of them have had systems of vital statistics in operation for many years. Their results, however, are not sufficiently accurate to determine their true death rates, with possibly a single exception. Minnesota has had a system of mortality statistics based upon certificates of death since the year 1887, and the results obtained under it are claimed to



be reliable. In the chart showing the registration area in black and the non-registration area unshaded,[2] Minnesota is partially shaded and should, perhaps, be included among the full registration States.

1. The registration States will be benefited by the annual compilation of their data, which is an important feature of the proposed law, and which will undoubtedly bring out many valuable comparisons. Something similar has already been undertaken by the registrars of the six New England States in the quinquennial "Summary of the Vital Statistics of the New England States." In the case of Michigan, which I trust may become a registration State by act of the present legislature, we shall be very glad to devolve the higher statistical treatment of our vital statistics upon the bureau of the general government, which alone can handle them to the best advantage;

[2] The division is made on the basis of mortality statistics alone. New York has imperfect returns of births and marriages. Several of the so-called non-registration States have excellent systems of marriage statistics.

sufficient for the State registration bureau will remain in the thorough administration of the law for the collection of data, the primary compilations, and the issuing of timely information in the shape of bulletins or otherwise for the benefit of the public health service. What is true of the State systems of registration is even more true of the municipal systems, especially those situated in non-registration States. There are few if any satisfactory compilations of their vital data, and a central bureau competent to act as a general clearing-house for municipal systems of registration is greatly needed. It is not enough to accept and publish the mere statements of city authorities. The accuracy of registration must be examined and standardized, population must be properly estimated, and such a general supervision be exercised over the conduct of registration that the results, when published by the government bureau, shall be known to be reliable.

2. Even greater advantages will accrue to the so-called non-registration States, which include about 96 per cent. of the area and four-fifths of the total population of the country. It is not feasible to institute a general system of registration in these States, but the bill provides that "data may be obtained from representative localities not having such records, at the discretion of the Director of the Census." The bill at present limits such collection of vital data from the non-registration States to "the time of the decennial census;" this, however, is an oversight which will be amended before passage. The reasons for a continuous registration of vital data in non-registration States are as strong as those for an annual collection of data from the registration States, or even stronger, since the data from the latter are accessible at present, while the proposed representative data will depend for a time entirely upon the census bureau.

In the chart certain circles with central dots represent the locations of agricultural experiment stations in the United States. It is planned, under the power intrusted to the Director of the Census, to establish vital statistics observation stations, or rather districts, in much the same way. Selected counties from each State, carefully chosen with reference to geographical situation and representative character of population, will give reliable information in regard to the vital movement of each State. Reliable representative birth rates and death rates will at last be obtainable. For years the sanitary workers in the great central West have been handicapped by the absence of reliable mortality data. When the way is shown, and the people shall actually see the benefits resulting from accurate registration among them, undoubtedly an increase in the number of State systems will result. Of course it may be necessary to have several registration districts in the same State, if a large one, or having great diversity of population; perhaps three or four districts will be sufficient on the average.

It will be very necessary to select districts having an average distribution of urban and rural population. One of the chief objections to the vital statistics of the cities of the non-registration States at present is their failure to represent the average degree of density of population. Statistics obtained from the country as well as from the city would be less objectionable in this respect.

Taken altogether, the provisions of the proposed bill relating to vital statistics seem well adapted to introduce a system of partial but thoroughly representative registration, whose results will be vastly superior to anything we have previously derived from the census investigations. All of the details of collection of data and the specific limits of the inquiry are, of course, not yet worked out. Enough of promise appears, however, in the draft of the organic census law to enlist the interest and assistance of physicians, sanitarians and sociologists in behalf of the measure, and I sincerely trust that active efforts will be made to assist its passage by all who desire better vital statistics for the United States.

THE EFFECT OF THE EXTRINSIC POISONS ON THE EYE.

Read before the New York Academy of Medicine, General Meeting, Oct. 15, 1896.

BY J. HERBERT CLAIBORNE, M.D.

Adjunct Professor of Ophthalmology in the New York Polyclinic, Instructor in Ophthalmology in Columbia University, Assistant Surgeon New Amsterdam Eye and Ear Hospital, Member of the New York Academy of Medicine, etc.

In presenting this subject I recognize fully the difficulties I encounter. The list of agents which when taken into the system produce disturbances of vision is a long one. I do not hope, therefore, to present them all. I shall select those that are most frequent and interesting and show in fact only the skeleton of the subject, leaving to you the task of clothing it with beauty and with flesh.

In the beginning I desire to express my indebtedness to Dr. G. de Schweinitz[1] and Dr. Casey M. Wood[2] for the assistance I have received in preparing this paper from their works entitled "The Toxic Amblyopias."

By the term toxic amblyopia I understand an interference in vision produced by certain drugs or substances that have been absorbed by the human system. Following Dr. Wood I divide them into two great classes: 1, those that directly affect the optic nerves; 2, those whose symptoms are unattended by retinal or optic nerve lesions.

The first class should be divided into two divisions: (*a*) those that produce a retrobulbar neuritis; among these tobacco, alcohol, tobacco-alcohol, carbon bisulphid, hashish, iodoform and arsenic are chief; (*b*) those that produce other forms of optic nerve and retinal disease, such as lead, quinin, salicylic acid or the salicylate of soda, venom of poisonous reptiles, silver, mercury, ergot, nitrite of amyl, the oxid of nitrogen gas, male fern and pomegranite. We will first take up the study of those agents that produce either retrobulbar optic neuritis or neuroretinal disease.

Among the agents that produce retrobulbar optic neuritis, alcohol and tobacco occupy first and second place respectively. It has been held, and at the first blush it appears not without reason, that these agents separately produce no toxic effect on the optic nerve. But upon careful examination of the literature that bears on this subject it is now obvious that there is an amblyopia dependent upon each of these. There can be no doubt that they are more frequently combined than separate in their action on the optic nerve, but I repeat it has been sufficiently proven that each one alone produces in toxic doses amblyopia dependent upon retrobulbar optic neuritis.

As far back as 1777 Plenck[3] recognized alcohol alone as a cause of amblyopia. Doebblin[4] has argued this in a thesis published in 1850.

It is highly probable that dilute alcoholic drinks in the form of beer and wine taken in moderation pro-

duce no effect on the function of vision. It has been claimed by Hutchinson[5] that the adulteration of alcohol by amyl alcohol, empyreumatic oils or the essences of the liqueurs such as wormwood in absinthe, hydrocyanic acid in maraschino, etc., are peculiarly apt to produce amblyopia. This point has not been by any means established. To any one who has made any observations on this subject it must be clear that the habit of taking many small drinks during the day and particularly before meals, is conducive to the causation of amblyopia. In fact it is the "nipper" and not the "spreer" whom we find the subject of amblyopia from the abuse of alcohol.

I myself have found it frequently among barkeepers who are accustomed to take a large number of small drinks during the hours of duty.

In alcohol as in all forms of poisoning the greatest difference exists in persons as to susceptibility. There are those who have drunk strong undiluted drinks constantly from youth all the days of their lives who have never shown signs of amblyopia, and there are others who show the signs after a very limited indulgence for a small number of years. Idiosyncrasy is a factor beyond any doubt. Nevertheless one rarely finds a case of amblyopia from either tobacco or alcohol or both combined under 40 years. Uhthoff has shown by a compilation that by far the greatest number of amblyopics from tobacco and alcohol are found between the ages of 40 and 50 years. There can be no doubt that the male sex has a decided monopoly of amblyopic symptoms from these two agents. Men are more given to smoke and drink in excess than women. In Uhthoff's compilation of 135 cases all were men. If women used tobacco and alcohol as much and as frequently as men there is no doubt that amblyopia would be found as frequent among them as among men. I have under my care at present a woman of 26, who for years has been addicted to tobacco and alcohol in great quantities and whose vision is reduced to 3—200 from retrobulbar neuritis. I should say that women would be more subject to amblyopia from tobacco and alcohol than men, all things being equal, owing to their more delicate nervous system. I have seen one case of tobacco amblyopia in a Portugese man between 30 and 35 years. One case of amblyopia from dipping snuff has been reported by Blitz[6]. I can not altogether agree with those who think that occupation is a predisposing factor except in the case of bartenders. It has been said that workmen and especially farm hands are predisposed, owing to their rising very early and the temptation which this habit brings of drinking and smoking on an empty stomach. My experience does not confirm the accuracy of this opinion. The strength and amount of the tobacco smoked and the strength and "neatness" of the liquor drunk certainly have a bearing on the subject. Those who drink neat whisky and brandy on an empty stomach and those who smoke short-stemmed pipes, strong tobacco and strong cigars are more liable to amblyopia than those who do not. It has been my fortune to see but two cases of amblyopia in which cigarettes had been smoked. One was the case of the woman referred to, whose case was complicated by alcohol, and the other was that of the Portuguese under 35. He did not drink to excess and smoked only cigarettes. One of the worst and most rapidly developing cases of amblyopia I ever saw was that of an Englishman of powerful frame, who told me that for twenty years he never was without a pipe in his mouth and frequently drank more than a quart of brandy in a day. He was a ranchman in Australia. It would be interesting to know the experienee of those present in regard to amblyopia from cigarette smoking.

I am not at one with those who claim that it is possible to make a difference between the signs and symptoms of the amblyopia from tobacco and that from alcohol. Since I hold this view I shall refer to their symptoms and signs together. Patients are apt to tell you as the first symptom that their vision is misty. A mist, they say, seems to hang over the print and it always apparently affects both eyes. They are apt to come to you and demand a stronger pair of glasses.

It is worthy of note that they rarely suspect the cause of their trouble. Perhaps the most distinctly characteristic symptom is the inability to recognize the colors red and green at the macula lutea. This is called central color scotoma. This is not always present in the beginning but is certain to be present later. The color perception outside of the region of the macula is normal. Hence the patients are never conscious of this defect till it is shown to them. In severe cases there is absolute scotoma at the macula, *i. e.*, there is no recognition of any object in the small area in the field corresponding to the macula. The field of vision as a rule is unimpaired in uncomplicated cases. In the beginning the ophthalmoscope reveals a congested optic nerve. As the neuritis goes on the optic nerve as a rule assumes a pallid appearance to the outer side where the fibers destined for the macula lutea lie. This sometimes has a triangular shape. Uhthoff found this sign in 63 out of 100 cases. For my part I have never failed to find it when the central scotoma for red and green was marked and certainly always when the central scotoma was absolute.

It is a question whether this form of optic neuritis alone ever goes on to complete blindness. It is always well to look to syphilis as a complication, since tobacco, alcohol and syphilis are a frequent trigeminal combination. Recovery is apt to occur only when the disease is recognized in its incipiency and the patient has the character to jugulate the habit.

I have no faith in the word of chronic smokers and drinkers. Their mental inhibition seems to be diminished. I think it may be said that as a rule these cases do not recover but retain enough vision to go about with difficulty, although not able to read or engage in any useful pursuit.

Quite a large number of cases of amblyopia from the effect of carbon bisulphid have been reported. This agent is a colorless, highly refracting liquid of a peculiarly disagreeable odor. It is very volatile in the arts and is chiefly used in the manufacture of vulcanized rubber goods. In this manufacture it is always associated with the monochlorid of sulphur. It has been thought that this latter agent has some influence on the development of amblyopia but this point has not been proved. The Committee of the British Ophthalmological Society appointed to investigate this subject came to the conclusion that it was the inhalation of the vapor and not the contact of the hands with it that produced the poisonous effects. The earliest symptoms are frontal and temporal pain as if the head was being squeezed. There are numerous other symptoms such as vertigo, loquacity and intoxication followed by depression. At first vision is misty as in the tobacco and alcohol amblyopia, then

vision is greatly impaired, there is central ring-shaped scotoma for colors and at times an absolute central scotoma. The optic nerve often becomes pallid. The prognosis as far as sight is concerned is good if the occupation is given up. Of twenty-four cases reported upon to the above-mentioned society about one-third recovered perfect vision, one-third improved a good deal and the remainder continued as they had been. Delpech[7] first described this amblyopia in 1856.

In addition to its well-known effects, haschisch or Indian hemp produces inconstant symptoms of amblyopia. The drug is taken by the natives of India in the form of leaves which are smoked, a conserve which is eaten or an oily mess made with melted butter which is sipped. Ali[8] has reported a number of cases as occurring in Persia. James Oliver[9] noticed dimness of vision and weakness of accommodation. Cassicia's[10] case developed mydriasis with hallucinations of vision. Werner[11] reports a case of cloudy violet vision in a small, nervous woman. The various reports hardly entitle cannabis indica to a place among the amblyopia-producing intoxicants.

Hirschberg[12] seems to be the first to publish a case of iodoform poisoning with this symptom. His patient was a young girl whose hip joint had been dressed with iodoform. There was intoxication and the vision was lowered to 1—20 and 1—30 in the right and left eye respectively. There was also a decided central scotoma for form. In eight days recovery was complete. E. Hutchinson[13] and Priestley Smith[14] have reported two more cases. In both of these cases iodoform was given internally. In Smith's case there was absolute central scotoma with greatly diminished vision, but in Hutchinson's case there was greatly diminished vision without any scotoma. Both cases recovered in a few months.

It is well known that those who work in arsenic, such as painters and paperhangers, as well as those who take arsenic medicinally and habitually, suffer from eczema, edema and pigmentation of the external ocular appendages. In addition to this, however, it is well established that arsenic in poisonous doses produces well-defined effects on the optic nerve. Liebrecht[15] reports a case in which a man who took arsenic for psoriasis to the point of vomiting and headache evinced great deterioration of vision, *e. g.*, in the counting of figures at eight feet. There was also well-marked paracentral scotoma for red and green together with temporal pallor of the optic disc. Dana[16] reports a case of an American whe took increasing doses of Fowler's solution till he developed sensory and motor paresis and a well-defined optic neuritis. He recovered on discontinuance of the medicine. Derby[17] reports a case of a man who had severe arsenical poison from the fumes of the wallpaper in his library. He found double optic neuritis with a hemorrhage in one eye.

I shall now leave the poisons that produce chronic retrobulbar optic neuritis and shall take up the consideration of those that produce other forms of optic nerve and retinal disease.

Among these agents lead and quinin stand preëminent. Plumbism does not always affect the eyes in the same manner. The commonest sign is said to be optic nerve atrophy, which comes on slowly. The disc is pale or grayish with contracted arteries and dilated veins. It commonly goes on to total blindness, and when that is not the case there are defects in the center and periphery of the field with much diminished visual acuity. Uhthoff describes the case of a color-mixer who had retrobulbar optic neuritis with absolute central scotoma and vision reduced to to 8—200 in one eye and 7—200 in the other. De Wecker[18] and Massalon say that retrobulbar optic neuritis is common in lead poisoning and that if the poisoning continues there will always be absolute central scotoma. Gowers[19] shows that optic neuritis with retinal hemorrhages, in fact the picture of neuroretinis hemorrhagica, occurred in his case. Finally a condition of amblyopia fugax has been observed without fundus changes.

In chronic lead poisoning the other well-known systemic symptoms persist as a rule for a long time before amblyopia is observed, although Samelsohn has shown that sometimes ocular symptoms are observed first and in such cases the prognosis seems to be good. The prognosis is favorable when vision is but slightly reduced and the fundus lesions are slight or recent. Other ocular symptoms have been observed in lead poisoning, especially paralysis of one or more of the extrinsic muscles. Landesberg,[20] Von Schroeder[21] and Wadsworth[22] report such cases. Dr. Pooley has recently called my attention to a case reported by Lagleyze[23] of Buenos Ayres, which is, I believe, unparalleled. A man of 45 shot himself in the palm of the right hand with a fowling piece. (*La Clinique Ophthalmologique*, August, 1896.) Several shot were taken away, a few came away by suppuration, but seventeen remained encysted. Without going further into the details of this case, suffice it to say three years afterward there was a paresis of the internal rectus of the right eye which after several months became a paralysis. During these three years he was subject to symptoms of colic and spasms of the abdominal muscles.

I regret very much I have not more time and space at my disposal to discuss more fully quinin amaurosis. The subject is certainly interesting and important. In consideration of the great amount of quinin that is yearly prescribed, particularly in malarial countries, it is curious that not more than fifty-five or sixty cases of amaurosis are on record. In referring to the toxic effect of this drug on the vision, we always use the word amaurosis and not amblyopia, because it produces blindness.

Giacomini[24] reported the first case. The amount necessary to produce amaurosis varies greatly. I myself have cited a case in which 15 grains produced total blindness lasting a number of hours, and it is recorded by Vorhees[25] that one person took 1,300 grains before blindness set in. I am inclined to believe that idiosyncrasy is a factor when small doses produce blindness, and that any one may become blind from excessive use of the drug. Atkinson[26] has made a masterly review of the subject and I would refer you to his work for details as to the literature and symptoms of quinin blindness.

Dr. Knapp,[27] in 1881, thus describes the signs and symptoms of quinin amaurosis: "Marked pallor, general weakness, twitching of the mouth and extremities, total blindness and deafness associated with loud tinnitus aurium. The pupils are widely dilated and do not react to light, but do to accommodation. The patient often loses consciousness to a greater or less degree. The ophthalmoscope shows an absolute anemia of the optic nerve and retina. The papilla is chalky white and no trace of a blood vessel in that or

the retina is to be seen. This[28] state of things is seen in every case." Over against this statement I desire to place a case I have reported. After a large but undetermined dose of quinin a man of 45 became delirious and finally exhibited total blindness. He recovered to the extent of seeing white objects in a dimly lighted rooms. Two years afterward his optic nerves were dead white, but the arteries and veins could be distinctly traced on the disc and into the retina. I can not refer to this subject without bringing before your notice the monumental work of Dr. G. de Schweinitz,[29] who has shown by feeding quinin to dogs that the same signs and symptoms as occur in man can be produced in them. Microscopic examination of the optic nerves after death showed the characteristics of true atrophy. The prognosis is said to be good, as a rule. The blindness persists from a few hours to years. The central vision returns to normal after some days, weeks or months according to Gruening,[30] but the peripheric blindness remains. My case is the only one on record in which the blindness remained for as long a period as two years. I hope I will be pardoned for presenting the conclusions I drew in 1894 from a study of this subject:[28]

1. Quinin in toxic doses may produce blindness.
2. The dose is distinctly indeterminate.
3. The duration of the amaurosis varies largely.
4. The field of vision remains contracted.
5. Central vision usually returns.
6. There is color blindness at first; the color perception is ultimately within the central field.
7. The ophthalmoscopic picture is that of white atrophy.
8. Experiments on dogs show that there is atrophy of the entire optic tract.
9. The same experiments show that the cells of the cuneus are probably not affected.

The only remaining statistics in this class that I shall discuss are the venom of reptiles, mercury, ergot, and the anthelmintics, male fern and pomegranate. It seems certain that in several instances blindness has resulted from the bite of venomous reptiles. Amaral states that this frequently occurs in South America. De Magalhaes[31] of Rio reports the case of a negro who became totally blind after a snake bite. The poisonous agent is an albuminoid in the secretion of the venom sac. It is said [illegible] poison of the cobra is a cycloplegic when [illegible] to the eyes of fowls.

Staderini[32] and Addario found that a 2 per cent. collyrium of toad poison produced anesthesia of the cornea that lasted four of five hours. In this connection I can not refrain from mentioning what is to me very interesting: Dr. Lambert, an American missionary to China, stated in a letter, that when cocain first came out he removed a foreign body from the cornea of a Chinese lady painlessly in the presence of a Chinese physician. The latter expressed no wonder at the result and said that his people had known that agent for 1,000 years, and that it was made from the eye of the toad.

I think mercury can be dismissed in a few words. Amblyopia from the absorption of mercury is beyond a doubt very rare. The only two cases that seem to me to be worthy of consideration are those of Galezowski, who reported an example of optic atrophy, and Square,[33] who reported one of optic neuritis due to the poisoning from this drug.

Ergot presents a much more interesting field. Transitory amblyopia has been attributed to poisoning from this drug, but the most important rôle that ergot plays in affections of the eye is that of causing cataract. The interest centers in South Germany and Russia, where a great deal of rye bread is eaten. Ignaz Meier,[34] in 1857, saw twenty-three cases of cataract in the epidemic of rye poisoning in South Germany. A wet summer produced disease of the rye and the peasants ate bread made from the diseased rye in spite of warnings. Two hundred and eighty-three cases were affected by ergotism. Meyer saw twenty-three cases of cataract the following year among these people, of which fifteen were women and eight men. The form of cataract was the senile form and it progressed slowly. The remaining structures of the eye were healthy. Kortnew[35] saw a number of cases in Russia during the epidemic of 1889–90. Two thousand people were affected with ergotism. About two months after the beginning of the epidemic the eye symptoms were noticed. He divides the symptoms into two groups, the intermittent fugacious amblyopia and cataract. It affects both young and old. The cataracts formed slowly, growing from the center toward the periphery. The operation of extraction was successful, except that there was an unusual loss of vitreous.

Male fern has produced amaurosis and amblyopia in several well authenticated cases. One case reported by Eich[36] died. In several cases in which the patient survived, optic nerve atrophy resulted with total blindness. Zimmerman[37] publishes a case of bilateral optic nerve atrophy from a dose of 10 grams and Fritz[38] one of unilateral atrophy with sudden blindness. His case was that of a servant girl of 18, affected with tenia, who took 6 grams of the extract in as many hours. She fell in convulsions and coma and when she recovered was blind in both eyes. After several months her right eye recovered normal vision, but the left remained amaurotic with atrophy of the optic nerve.

Pomegranate can be dismissed with a line. Jacobson records a case in which there was paresis of accommodation and amblyopia from the development of latent hypermetropia.

We come now to Class 2—Those poisons whose amblyopic symptoms are unattended by any retinal or optic nerve lesions. With Wood, I divide these into three subdivisions:

1. Those agents that produce mydriasis as their chief symptom. Among these the most important are the solanaceæ, belladonna, hyoscyamin, daturin, duboisin, etc. Their effect on the pupil is well known; they produce mydriasis and paralysis of the accommodation. I am inclined to place cocain among them, for it certainly dilates the pupil and slightly affects the accommodation. These agents have their most marked effects when introduced as solutions in the conjunctival sac, but they may likewise produce them when introduced in toxic doses into the system. It is to be remembered that atropia is apt to produce glaucoma when used in adults, and that severe toxic general symptoms have frequently been observed to follow the instillation of a solution of duboisin in the eye. I do not believe that cocain has any tendency to produce glaucoma. On the contrary, my experience has taught me that it reduces the tension of the eyeball.

The ptomains and leucomains to be found in decomposed or "high" food, affect the eye as the mydriatics, namely, by producing dilatation of the pupil and paresis of the accommodation. Among such

foods may be mentioned uncooked tainted meat, rotten sausage, rotten fish, poisonous fungi and shell fish, mussels in particular. In mussels the poison is found in the liver and is similar to curare in action.

An American physician, says Wood, observed a case of mydriasis and paresis of the accommodation from eating turkey. He assumed that the bird had eaten the berries of the deadly nightshade. It is far more reasonable to assume that the turkey was "high" and the poisoning was due to tyrotoxicon. The extrinsic muscles have likewise been paralyzed and ptosis, or drooping of the lid, has been frequently observed. Grienouw[39] recites the case of several members of a family who ate raw ham; all had mydriasis and cycloplegia. The ham was fed to mice, which it killed in twenty-four hours.

2. Agents that produce myosis or a contracted pupil. Among these are opium and its preparations, chloral and its hydrate, eserin, pilocarpin, strychnin and nicotin. The effect of opium upon the pupil is well known and is a strong diagnostic sign in poisoning by this drug. Physostigma venenosum or calabar bean with its preparations, and jaborandi and its preparations, which are decided myotics when applied directly to the eye, generally cause mydriasis in systemic intoxication. Eserin and pilocarpin have the effect of decreasing intraocular pressure when applied to the eye, and hence are used in the treatment of glaucoma. By some delicate subjects eserin is not borne, as in such cases it congests the eye, gives supraorbital pain and produces vomiting. For such cases pilocarpin is better, though its effects are more transient and less powerful.

3. Poisons that produce irregular eye symptoms: This lists is a long one. Those that are most worthy of notice, it seems to me, are santonin, the anilin dyes, emanation from pitch and coal, naphthalin and the bromid of potash. Santonin, picric acid and amyl nitrite may be grouped as triplets, producing colored vision, generally xanthopsia or yellow vision. There are several theories to account for these visual disturbances. Helmholtz has thought that it is due to the direct action of the drugs on the nervous elements of the retina. Others think it is due to a tinging of the media of the eye, as the urine is colored in such cases. This phenomenon was first observed by Hufeland in 1806. De Martigny[40] has made some interesting observations on this subject. He found in some cases that the yellow passed into other colors. A dose of .3 grams was followed by xanthopsia, .6 grams caused red vision, which turned into orange and then into yellow. Another patient saw green and still another blue. It seems quite certain that anilin, which is the base of the beautiful dyes of commerce, produces amblyopia, photophobia, muscæ volitantes and headache. The workmen in dye factories often complain of these symptoms. Akin to this is the effect produced upon workmen by the emanations from pitch and coal. The fine powder from these substances fill the pores of the skin, choking the sweat ducts and pass into every cavity of the body. The poisonous emanations are mainly phenol and anilin and the result of their being absorbed into the system is analogous to those of anilin. Naphthalin likewise is a product of coal distillation, and the chief interest that centers round its absorption into the system is the probability of its causing cataract in the human being. Experiments have proved that it produces cataract when fed to rabbits. I refer you to a paper by H. Magnus[41] for information on this point. Notwithstanding the large doses of bromid of potash taken by epileptics it is significant that but few instances have been recorded in which this drug has produced visual disturbances. Rubel reports a case of a patient who took 235 grains daily. One day he became suddenly blind. Examination showed pallor of both discs and contracted retinal arteries. The bromid was stopped and vision returned.

It is difficult to draw any other than general conclusions on such a broad subject as this. I think, however, the following are permissible:

1. There are certain poisons which when introduced into the human system produce characteristic toxic symptoms in the eye.

2. These poisons are divided into two grand divisions: *a*, those that produce organic changes in the optic nerve and retina; *b*, those that produce no organic change in the optic nerve and retina, in short, those whose effect on the eye is a functional one.

3. The majority of these poisons are found in the list of medicinal remedies.

4. In view of these facts it is obviously important that practitioners of medicine should be intimately acquainted with the toxic effect of these poisons on the eye.

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Experimental Investigations of the Effect of Certain Purgatives in Acholia.—Stadelmann tied and resected part of the ductus choledochus and made a biliary fistula in dogs, thus preventing the passage of any bile into the intestines. Certain purgatives administered then failed to produce any effect, among them podophyllin, podophyllintoxin and scammonium, while others, including calomel aloes, aloin, gamboge and jalap produced the usual effect.—*Nouv. Remèdes*, December 8.

GONORRHEAL OPHTHALMIA—REPORT OF CASE.

BY HENRY W. WANDLESS, M.D.

Consulting Oculist and Aurist of Parkland Hospital; Chief Surgeon Dallas Charitable Eye, Ear, Nose and Throat Infirmary; Consulting Oculist and Aurist to the M. K. & T. and G. C. & S. F. Railways.

DALLAS, TEXAS.

T. F. S., a strong, robust young man, contracted a typical case of gonorrhea. As he did not regard it with much anxiety, and as it was no unusual thing with him, he began treating himself. On the eighth day of its progress his left eye became inflamed and in three hours, at which time I saw him, his eye was violently inflamed, discharging profusely and very much swollen. He told me his story and I saw that I had a serious case to handle. I decided that heroic treatment was demanded at once. I lost no time, after cleansing the eye, in applying a nitrate of silver solution, 40 grs. to the ounce of water, thoroughly to both upper and lower lids; after allowing it to rest a few moments, cleared off the excess with solution of acid boric 4 per cent. and common salt. I then put him in a recumbent position and applied to closed lids hot solution of mercuric chlorid, 1-2,000, continuously for one hour. I then cleansed eye again with solution boric acid, bandaged it well and ordered him to return at 6 o'clock P. M., it then being 3 P. M. When he returned, to my great surprise, I found very much less discharge, swelling considerably reduced and very little pain. My first thought then was that it was not a case of gonorrheal ophthalmia; but without taking any chances, I continued my treatment as outlined —anti-gonorrheal. I flooded the eye with bichlorid of mercury solution, 1-5,000, instilled a 6 per cent. of cocain, bandaged the eye and ordered him if pain returned or discharge became profuse during the night, to send for me at once. I ordered hot fomentations before bedtime for one hour, consisting of Pond's extract, boric acid and water, and told him to return at 8 o'clock next morning. He showed up on time, greatly improved, with bandage off. He reported following my directions to the letter and said that he went to sleep at 10 o'clock and slept all night. He did not open his eyes until 5:30, when he got up and bathed the eye in the solution used before retiring, the eye having glued together during the night. I applied a solution of zinc, 5 grs. to the ounce, after profusely flooding it with boric acid solution. I saw no further need of silver. He returned at noon when I repeated the morning treatment and at night I did the same thing. At this time there was some ecchymosis in lower lid and considerable in conjunctival membrane. I ordered hot fomentations of salt water and a weak solution to be allowed to enter between the lids. He again showed up at 8 o'clock the next morning, after having had a good night's rest. The eyelids did not adhere the night previous and only a moderate quantity of pus remained in the corners. I continued the previous day's treatment, morning, noon and night. He returned the next day very much improved, with only a slight discoloration about the lids and conjunctiva, and I considered the eye well. He came for a few days for inspection rather than treatment. I had made up my mind by this time that the inflammation was non-gonorrheal and that the urethritis was not of gonorrheal origin. The young man assured me that he knew what he was talking about and pointed to the very moment when he inoculated his eye. He bathed his eyes as a precautionary measure, but evidently failed to dislodge the virus, as results show. To satisfy myself I had Dr. J. B. Shelmire make a microscopic examination of the urethral discharge, which revealed gonococci in the pus cells in great numbers. I then became convinced that I had dealt with a true case of gonorrheal ophthalmia. Had I had presence of mind I could have had the discharge from the eye examined microscopically, as I afterward did the urethral discharge, and verified my diagnosis; but in my great anxiety my only thought was that of saving the eye. It was not till after danger had passed that I thought of the microscopic examination.

I report this case for three reasons: 1, because of its rapid and most violent onset; 2, for its complete and rapid recovery; 3, because it required only one application, 40 grs. to the ounce, of nitrate of silver to eliminate its characteristic symptoms.

It is not necessary to go into detail and give all the different oculists' treatment; but I think I am safe in saying that the general drift of opinion is in favor of less heroic treatment.

The less heroic treatment does well in children under 3 years and for infants, but in adults and older children we need something heroic—something which by its severity more nearly counteracts the disease. In one caseof a little girl, 3 years old, after having used milder treatment for several days with no appreciable good, I applied nitrate of silver, 40 grs. to the ounce at one time which completely put the disease under control. The ulcer on the cornea began to heal at once.

Every oculist who has been so unfortunate as to have a case of gonorrheal ophthalmia to treat, knows what it means; and if I could by the report of this case arm him with more effective means of combating this dreadful disease, I shall feel that I have done good.

There were no bad results in this case, not even the least infiltration of the cornea.

North Texas Building.

INTRACRANIAL ABSCESS.

A paper read before the Wayne County Medical Society, Oct. 15, 1896.

BY HAL C. WYMAN, M.Sc., M.D.

PROFESSOR OF SURGERY, MICHIGAN COLLEGE OF MEDICINE AND SURGERY. DETROIT, MICH.

Recent improvements in surgical technique enable surgeons to open the cranial cavity with much less danger than formerly attended operations of this class. Anesthesia, antisepsis, better instruments and more knowledge of surgical history and news, make the foundation on which this improvement rests. The art of diagnosis keeps pace with the advance in surgical methods. The general forward movement along the whole line of medicine has helped to crowd the cranial cavity with industrious investigators. The bony envelope of the brain is no longer a Chinese wall against research and discovery concerning the function and aberrations of the organs of the mind.

The common cause of abscess, infection, operates on the same principle in the cranial cavity, but under different conditions from those which obtain in other parts of the body. For example, the swelling incident to an infection of the knee-joint occurs in consequence of the yielding character of the joint tissues under the pressure of inflammatory processes. In the

skull, however, infection can not show itself by swelling and tumefaction because of the unyielding character of the skull wall. The different anatomic conditions under which infection and abscess occur, will therefore yield symptom phenomena of divers and varying kinds, but their significance and interpretation will not be the less unvarying and constant. Thus, swelling in the skull will yield the symptom phenomena of brain compression, with an aberration, impairment and loss of function in the part of the brain compressed. Infections commonly proceed along certain channels, for which they seem to manifest a well-defined preference. The lacerated and bruised finger when infected will, in most instances, show that infection by pain, redness and swelling of the lymph channels of the forearm and arm. If abscess results, it will generally be found in the connective tissue lymph spaces of the forearm or arm. If an infection follows an injury to the Eustachian tube or middle ear, it will be quite certain to travel, with pain and swelling, along the lymph spaces adjacent to the lateral or sigmoid sinuses. If abscess succeeds, it accumulates in the mastoid, cranial or aural cavity. The symptoms of this infection will be, 1, a history of injury to some part of the auditory track; 2, pain in the region of the ear or side of the head: 3, impairment or loss of function of some part or parts of the brain, delirium, convulsions, paresis, coma, paralysis. There may or may not be a record of abnormal temperature, but there will surely be found the constitutional symptom of inflammation and of abscess, although the chill, classical in the history of abscess, may not be clearly defined. The degree of primary inflammation may not afford an accurate index of the amount of the brain function impaired. It may not be sufficient to cause much pain, loss of sleep and appetite, and yet produce when choked within the bony walls of the skull, delirium, convulsions, paralysis, coma, death.

Intracranial abscess, in so far as its primary symptoms are concerned, may give rise to the same phenomena as intracranial hemorrhage, effusion or depressed fracture. Certain drugs may also produce those symptoms. They are whisky, opium, gelsemium and other narcotics including those derived from coal tar. The differential diagnosis can generally be made by a careful study of the history of the case. The character of the onset. The certain finding of the infectious entrance in some part of the face, head or neck, with the symptoms of impairment of brain function and the persistence of the symptoms after time has been allowed for the elimination of drugs, will make a quite safe foundation for a diagnosis. I do not mean to dispute the unusual fact that an infection entrance, in brain abscess, in parts of the body remote from the head and neck, may be found. I have found, postmortem, a large abscess of the right frontal lobe of the brain in which the symptoms leading to it followed an injury of the foot, but such remote sources of intracranial infection are not the rule. The particular part of the intracranial contents which is the seat of abscess may vary, and I know of no external sign that is infallible of the location of an intracanial abscess. Abscesses having their origin in throat or ear inflammations may be looked for in the region adjacent to the lateral and sigmoid sinuses, and obstruction of the blood current in those vessels should be looked for. Sometimes it is found as a hard, cord-like mass extending into the internal jugular vein, which can be felt deep in the neck below the angle of the lower jaw, but this is only sometimes. In other cases the obstruction will cause the blood to dam back and choke the vessels of the conjunctiva and eyelids on the affected side. The ophthalmoscope may reveal the presence of obstructed venous circulation under the circumstances. Other times the abscess may be deeply seated in the brain tissue and not affect directly the membranes or their vessels. Then its presence may be recognized by the impairment of function which follows destruction of brain cells and fibers, but so little is known of the local functions of the brain that no great accuracy can be expected from this source. A patient may have a paralysis or paresis limited to certain sets of muscles of face, arm or leg and in consequence the abscess be looked for in some part of the fissure of Rolando. The motor areas of the cerebral cortex are quite well defined and peripheral feebleness or paralysis can be located with reasonable precision. Likewise, certain sensory areas can be limited. Paths of white fibers leading to these areas may be the seat of inflammation and abscess and then this loss of function will have the same diagnostic and localizing significance common to all neurotic symptoms, which are stated rather crudely as follows: Loss of function or nerve energy in the parts supplied by a nerve indicates that a lesion exists in some one or all of the parts known as the ending, trunk or center of the nerve. Now, when by exclusion we have traced a lesion to the cavity of the skull, we may still be in doubt as to whether it is located in the cortex or white substance. Of course, we know that the wider the field of loss of function, the greater the probability of the inflammation or abscess being located in some of the narrow paths where large numbers of communicating fibers are associated, for example, the internal capsule. And when there is a loss of function in parts supplied by well known cortical areas, we have little trouble in making a differential localizing diagnosis. But suppose, as often occurs, the well known cortical areas and sensory and motor paths are not specifically affected, that the loss of nerve energy as shown by paralysis and coma, is general, where will we look for the products of inflammation? Bearing on the solution of this question which, I think, must be settled by a careful and discriminating interpretation of the history of all the phenomena as they have developed from hour to hour, we must not forget that a small inflammatory lesion in the cortex or any part of the brain may impair the function of the whole brain or of limited areas of it, much more extensive than the anatomic boundaries of the lesion. Particularly is this true when the lesion involves the blood supply to parts of the brain. The physiologic relation of blood and brain to nerve energy can be compared to a sponge and water. Compress or otherwise obstruct the flow of blood through the brain or any of its parts, and you drive the nerve energy out of the brain as the water is driven from a wet sponge when it is squeezed in the hand. We have already spoken of inflammatory lesions involving the cerebral sinuses. The obstructive phenomena which we would naturally expect to follow the development of a large inflammatory thrombus in the lateral and sigmoid sinus, does not commonly occur for the reason that the outlet for blood through the jugular foramen on the opposite side of the skull is competent to empty the skull of venous blood as fast as it is produced, but usually, however, it is slow in adapting itself to the increased

work, and in consequence the quality of nerve energy developed from the brain cells is more or less impaired. Hence the varying degrees of delirium, mania, paresis, convulsions, coma, which sometimes accompany a case of intracranial abscess, and a few of the difficulties in bringing it within reasonable reach of a surgical operation. I think it a sound surgical procedure to open the skull when we are satisfied that pus or other inflammatory products are pent up in its cavity, and no one would think of disputing it if I could with precision say where those products could be found, so that an operation would surely be followed by an immediate discharge of them. This, however, in the nature of things can not be. But the opening in the skull can be used to search for the abscess or other products of inflammation. Often abscesses are located between the dura mater and the brain; then the trephine, if applied directly over the place where these morbid fluids are located, will permit their immediate evacuation.

Trephining is an exploratory operation generally, although the simple removal of a piece of the skull wall may give vent to pent-up fluids and change the character of blood and lymph circulation so that curative process may commence. Sometimes in the search for the inflammatory nidus after opening the skull, a probe pushed beneath the bone in the direction of the supposed location of the inflammation, will find it and establish a channel for the discharge. Healing of the wound and the cure of the patient, however, will generally be better accomplished by removing a strip of bone over the inflamed and suppurating area, sufficient to secure good drainage. For this the trephine should be supplemented by the use of some of the bone-cutting forceps or rongeurs. One devised by Dr. De Vilbiss of Toledo, Ohio, is well adapted for the purpose. Chisel and mallet and drills are often used, but I do not like the idea of pounding the skull with a mallet, consequently always use a small trephine, which removes a button of bone three-fourths of an inch in diameter. Through the opening made with it, the point of the finger can be introduced and the membranes palpated. The same valuable information as regards pulsation, density, resistance and temperature can be learned about the brain in this way that can be learned by the sense of touch applied to other parts of the body. If the membranes bulge into the opening we know there is excess of pressure; if there is absence of pulsation we know that circulation has, in part at least, ceased beneath our finger. The dura mater should be incised when there is abnormal pressure beneath it, and always with great caution against infection. If epidural inflammartory areas are discovered, the dura mater should not be opened lest the arachnoid space be exposed to infection. At first the opening in the dura mater should be made with a fine needle, preferably a hypodermic needle, which can be used to exhaust some of the fluid for examination. If found purulent, it should be at once evacuated through an opening in the dura mater large enough to hold a short drainage tube about the size of a lead pencil. One end of the tube should be inserted beneath the dura and the bone far enough to hold, in the direction from which the pus appears to come. The other end of the tube should barely project from the scalp so that it can be easily covered and protected by the dressings. Unless the cavity is large, the writer does not find it necessary to resort to irrigation. In his experience, as a rule, a daily change of gauze absorbent dressings has sufficed to keep the wound clean and promote healing. In a case of abscess of the frontal left lobe following a compound fracture, and in which the abscess was recognized and located by the occurrence of convulsions followed by coma, I operated at the Emergency Hospital; used the trephine at the lower angle of the fracture, broke through the inflamed and lymph-covered membranes with point of scissors and penetrated and evacuated an abscess which was apparently in the white substance, a full half ounce of pus discharged; a gauze drain was used and removed daily, all untoward symptoms gradually disappeared and the patient was cured well and sound. A man aged 24, whom I trephined for epilepsy of almost daily occurrence, was doing well in the Emergency Hospital on the tenth day after the operation. The scalp had healed. Because of hemianopsia preceding the epilepsy in the aura, I trephined on the left of the torcular Herophili and removed a strip of bone three-fourths of an inch wide and two inches long, upward obliquely at an angle of 45 degrees to the left lateral sinus. I also opened the dura and discharged some fluid. A few days after reaching his home the patient became stupid; when roused said his head ached, lost his appetite, rolled his eyes up, became very restless and muttered in delirium. His temperature rose to 104 degrees F. His pulse and breathing were very irregular, alternately fast and slow. I suspected abscess. Without anesthetic I reopened the wound, scooped out the new tissue in the bone and penetrated the membranes. The cortex did not pulsate. It felt hot and resistant. An exploring needle was pushed in the direction of greatest resistance and penetrated an abscess cavity at the depth of one-half inch. Two ounces, approximately, of pus discharged, after pushing a dressing forceps through the cortex alongside of the exploring needle. A drainage tube one and one-half inches long was introduced. The outer end of it was sutured in the scalp when the flap was replaced. A sterilized gauze dressing was applied daily. The patient recovered. His epilepsy did not recur until four months after this operation and then in much milder form. No water or other fluid was used to irrigate the abscess cavity.

I have mentioned these cases because they illustrate the existence of abscess of the white substance. In neither case was there any paralysis nor paresis of a localizing character. I found the abscess by exploring for it. The intracranial abscesses which follow nose, throat or ear infection is much more frequent and is almost always meningeal. It should be operated early to avoid general meningitis. The opening for the purpose should be made through the skull near the base of the mastoid. Care should be taken when operating early, to not saw into the lateral sinus. I have never known serious hemorrhage from the sinus when wounded in the course of an operation for inflammation of the parts adjacent to it, but I believe in taking every precaution compatible with removal of a button of bone from contact with the sinus. With ordinary skill in operating and selection of cases in which general infection of the subarachnoid space has not occurred, one may reasonably expect most of the cases of intracranial abscess to recover.

Let us have a Department of Public Health!

SOCIOLOGIC REFORMS.

Opening address, read before the State Conference of Charities and Corrections at Springfield, Nov., 12, 1896.

BY ARTHUR R. REYNOLDS, M.D.

PRESIDENT OF THE BOARD OF STATE COMMISSIONERS OF PUBLIC CHARITIES OF ILLINOIS.

The Board of State Commissioners of Public Charities were moved to call this conference, feeling that there was a growing demand for knowledge of our institutions, and an increasing interest in the care of dependent persons. There seems, also, to be an awakening among charitably inclined people, as to how best to help those who can not help themselves. It is true, that our board publishes every two years a report of their doings, so also do the larger institutions, but they are read by comparatively few persons.

The amount of money paid out directly by the State, to support persons unfitted by nature or disease to support themselves, is very large, but when we come to consider the amount expended by the several counties and municipalities, and the sums subscribed, through churches and other public bodies of organized charity, together with the amount expended in private work, of the same kind, the total amounts to enormous figures.

It is to the credit of the tax-payers that there is never any complaint against paying a liberal allowance for the care of the sick and needy, and however heavy the total burden of taxes may be, there is no one that would have it lightened, if the retrenchment would bear upon the scanty portion of the poor.

Notwithstanding all the treasure that has been lavished upon the unfortunate, there seems to be an increasing demand that it should go on and on. There are many indications to warrant the belief that the increase of dependents is in greater proportion than the increase of population. In spite of the efforts made toward relief, the increase of those who need care grows faster than the increase of the means to care for them. Some even go so far as to say the race is in danger of being overwhelmed, and fear for the future of the State and society.

As we ponder on the subject, the conviction grows that there is something wrong in our methods of dealing with the question. We ask ourselves whether or not it be wise to continue forever harvesting this crop of human tares; if it would not be wiser to follow the example of the prudent husbandman, and prevent the unprofitable seed from taking root; if it would not be wiser still to expend more time and toil preparing the soil for the sowing, that there may be economy in the gleaning.

We can not escape the fact that a large number of criminals and those with a susceptibility to mental and physical disease, and even the paupers, are foredoomed to their fate before they are born, and should not have been born at all.

It may not be practicable for an officer of the State to sit in judgment upon those who would marry, and properly foretell the exact physical and mental mold of the progeny. The State, however, can and should be able to do as much for the breeding of men and women as is done for the breeding of the beasts of the field. The passage of a just law for the regulation of marriage, with skilled officers to enforce it, would call the attention of the public to the question most forcibly. Once it becomes a matter of serious thought and study, by the people, the cure will be near at hand. There are none but would recoil from the thought of begetting offspring that would be lacking in any respect, if the question were brought home by a law that required them to pass muster before competent authority. While I firmly believe in proper selection for marriage I do not think this is the whole evil. More criminals, paupers and dependents generally are made after they are born than before. The children of vicious parents can be trained in the ways of righteousness if the training begin at the cradle, and the child of the good and wise can be spoiled if trained by vicious and indolent hands. We need more kindergartens and social settlements for the babies in the congested tenement districts of cities, before we add more universities for adults. If we can for one generation give to all children the proper environment and judicious training, we will have less need for penitentiaries, jails, bridewells, police stations and criminal courts. Indeed, such training is even a most rational cure for the withering blight of inebriety, and the endless train of degenerating evils, that follows in its wake.

If the proper training of children is of such moment, the greatest protection must be thrown around the sanctity of the home, for it is in the home and only in the home that the very best training can be had. The home, to be sacred, must be segregated, for indiscriminate crowding and association develops the evil propensities of a child rather than the good. Nowhere can the homes of the poorer people be segregated so well as in the country. Orphan asylums may be necessary and the right thing in their way for the present, but they are at best but a makeshift for the real remedy. The children of today will be the home builders of tomorrow. A child raised in a public institution learns nothing of this art, and will not take kindly to it after leaving the institution.

If the money spent in the support of orphan asylums were used to find individual permanent homes among the farmers for dependent children, in the great majority of cases a robust and normal adult would be the result. The direct saving of money, if this were the rule, must be great, and the gain to the State by improving the chances of the descendants is beyond estimate.

In our day the almighty dollar is the magnet that draws all mankind. To possess it is a passion with almost all kinds and conditions of men. It holds a despot's sway in the heart of every man, whether he be high or low in society's scale. It is a powerful entity that must be reckoned with in sociological science. So strongly developed is the desire for money, and the power it brings, and so keen is the struggle to obtain it, that rest, food, raiment, honor and even life itself are sacrificed on its altar.

Men crowd into a decade the labor that should be spread over the three score years and ten. Men and women suffering constantly from overwork and nervous strain can not reasonably be expected to beget children that are robust and normal, yet the world marvels that so few of the great have offspring that can fill the parent's sphere in the world. We are too apt to forget the fact that our men with the greatest minds and the strongest bodies have been reared almost wholly in the country.

The drift of population of late years has been toward the cities and away from the country. Efforts should be made to stop it, and transplant the surplus population of cities on the broad acres. But if we are to move the surplus out from the cities to the

country, our wise men must, if they can, make the dollar as easy to obtain in the country, as it is in the city, for the possession of money is the goal that all are striving to reach. Those economic features that best foster the profit of the farm, then, must play an important part in the welfare of the race, and should be carefully considered by our statesmen, as well as by students of sociology.

The State of Illinois has established, under supervision of the Board of State Commissioners of Public Charities, fourteen institutions, caring for more than 12,500 persons annually at a cost of about $133 per year each. Four of these are hospitals for the insane, affording care and treatment to 4,600 males and 3,000 females. Two other hospitals for the insane are in course of construction, one at Rock Island to accommodate 600, and one at Peoria to accommodate 200.

There are still about 1,000 insane in poorhouses, and in jails of the various counties, while Cook County maintains an insane hospital for the accommodation of about 1,300; there is also an asylum for insane criminals with 125 inmates; the Eye and Ear Infirmary with about 150 patients; the Industrial Home for the Blind, with about 75 inmates, who are furnished an opportunity to earn a portion of their living at least, and are freed from the feeling of utter dependence. There is a home for feeble minded children, with over 600 inmates, and as many more on the outside who should have the care of a similar home. The Soldiers and Sailors Home with 1,300 inmates; the Soldiers' Orphans Home, with 400 and over; the Home for Soldiers' widows with 20 inmates; the school for the blind, with 150 pupils; the school for the deaf and dumb, with over 300 pupils; the home for juvenile female offenders, with 75 inmates.

The management of all the State's institutions in the humane, scientific and financial aspect, is well abreast of the times. In addition to the supervision of the State institutions mentioned, the Commissioners of Public Charities are commanded to visit "each of the poor houses, or other places where the insane may be confined at least once each year." There are 102 counties in the State, each of which has a poorhouse. To do all this work and do it well, requires almost the entire time of all five commissioners. The State asks that this service be rendered without salary, the State only paying the actual cash outlay made.

There is a pressing need for a Home for Epileptics, and this conference would do well to ask our Legislators to provide it. To my mind, the greatest need of all, is another well equipped home, capable of receiving all the feeble minded children in the State, where those capable of receiving instruction may be made in some degree useful, and where the others can have ample custodial care, and where all, as they grow older, can be so segregated that they will not leave any descendants to inherit the blight that makes them a reproach to our civilization.

I venture to suggest the propriety of so enlarging the scope of our State Board of Health, as will permit it to do at least as much for the development of man as is now being done for the development of dumb brutes. The Board of Health will not have reached its limit in sanitation till it will have prevented human beings from being born with a susceptibilty that invites the attack of the deadly disease germs. The first necessity of human beings is good health. It is not enough that a State Board of Health should point out the way to the individual, so he can avoid contact with a germ that may eat him up. It could, if it would, point out the way to develop a being so vigorous and so strong, that the dreadful germ will itself be destroyed in the contest. Perhaps, too, our higher educational institutions might enlarge their usefulness if they would add to their curriculum of study a year at the forge, the lathe, the work-bench, the loom, or even a year on a farm doing the routine duty of the hired man, and working from sun-up till the darkness drives him from the field. A thorough grounding in the duties of the farm is to learn the foundation of all industries. Indeed, I pity the man who knows nothing of rural life; he is seriously handicapped, no matter into what sphere his fate may lead him. It is on the farm that a young man can better than anywhere develop a strong body, and a robust and normal intellect. It is there that a ruggedness of character can best be developed, that will later on make him spurn an evening at the club over wine and tobacco, where ribald jest is mistaken for humor. It will make him shun such perverted pastimes that too often lead to a degeneracy of his descendants.

Perhaps, too, such institutions of learning might with profit teach in a more practical way the physiology of man, to the end that none of their graduates would ever append their signatures to a document certifying to the wonderful virtues of Dr. Balsam's liniment. It is but fair that they should learn enough on the subject to drive out of them any superstitious notions they may have upon the cause and treatment of disease, for, "the proper study of mankind is man."

In conclusion, I beg to suggest the need of this conference, making a permanent organization and meeting at least annually to study the great problems that are embraced in the broad field before us. I can not think that the philanthropic spirit—the practical logic of the students of social law—the public spirit of the great commonwealth of Illinois, will be behind other States in this respect. She will take her place in this, as she has in so many other things, having no competitors but leading all, in the fullness of her destiny.

WHO WAS THE FIRST TO ILLUMINATE THE SIGMOID CAVITY?

Read in the Section on Surgery and Anatomy, at the Forty-seventh Annual Meeting of the American Medical Association held at Atlanta, Ga., May 5-8, 1896.

BY J. G. CARPENTER, M.D.

STANFORD, KY.

At Winchester, Ky., June, 1886, the author read a paper before the Kentucky State Medical Society on ulceration of the sigmoid cavity—Inversion of Trunk, Electric and Reflected Light in Diagnosis and Treatment, which was published in the *American Practitioner and News*, Vol. 11. New Series, No. 17, August 21, 1886, at Louisville, Ky.

On November 30, 1885, the writer visited J—— Mc. at Crab Orchard, Ky., who had had an attack of acute dysentery in August, 1885, and had made an incomplete recovery, and had been treated by his physician for chronic dysentery from September 18 to November of that year. Age of patient was 20 years, good family history, former health good, habits and morals good, and the following general and local conditions existed, viz.:

The patient was pale, weak and anemic; the tongue had a yellowish-white coat; the bowels were tympan-

itic and painful in the left iliac region, especially on pressure. Dysentery had been present since August, the stools averaging from three to six per day, and containing a little muco-pus with some blood. Each stool was preceded by pain in the tract of the sigmoid flexure. The pulse was ninety-six; temperature and respiration normal. Digital and ocular examination found the anus and rectum in a normal condition, though the latter contained an abundance of scybalæ, broken-down pus, epithelium and blood. A rectal injection of warm salt and water, as hot as could be borne, half a gallon in quantity, was given, the trunk being inverted at an angle of from seventy to eighty degrees with the bed. The object of this procedure was to wash out the descending colon, sigmoid flexure and rectum. The injection was retained for twenty minutes, when the patient resumed the sitting posture, and passed it. The bowel having been cleansed, the patient was placed on his left side and the trunk again inverted to an angle of seventy to eighty degrees, whereupon the abdominal and pelvic contents gravitated toward the diaphragm.

Sims' speculum was now inserted into the anus, which being dilated and the nates widely separated, the patient was directed to make prolonged expirations. Under these maneuvers the rectum became inflated, the distension being so great as to temporarily efface the folds of its mucous lining. An electric lamp was now introduced into the rectum, and an ulcer, one inch by two, was seen in the sigmoid flexure, ten inches by measurement from the anus. This was swabbed with absorbent cotton, and to it nitrate of silver, grs. xl to water ʒj, was applied. During the next six days, injections of water, as hot as could be borne, were given night and morning, with the trunk inverted but inclined toward the left side. These were for cleansing and soothing effects. In each instance after the first injection had passed, another of tannin, grs. x, laudanum, gtt. xx was administered for its astringent and anodyne effects, and to give rest to the ulcerated bowel. These injections were given invariably with the trunk inverted. Applications of nitrate of silver, grs. lx to water ʒj, were made every six or eight days, the injections being continued during the intervals until restoration was complete.

All subsequent ocular examinations were made with reflected light from the head mirror of a laryngoscope, sometimes by the sun, sometimes by the coal-oil lamp, both of which illuminated the ulcerated surface and lining of sigmoid flexure and rectum sufficiently for all practical purposes.

The constitutional treatment consisted of liquid nutritious food, rest in a recumbent posture, and massage night and morning. Mr. Allingham speaks of making rectal examinations with the hips elevated, the trunk in the prone position, and by aid of reflected light from the head mirror of a laryngoscope; but neither Erichsen, Bryant, Holmes, Ashhurst, nor Ashton or any other writer mention inversion of the trunk at an angle of seventy or eighty degrees, and the use of the electric lamp for exploration of the rectum and sigmoid flexure; and an entirely different posture to Dr. Sims' and original with the writer, and should be called "Carpenter's Posture or Method." Mr. Bryant, however, states (Surgery, p. 566) that Mr. Allingham advises the prone position with the hips well elevated upon hard pillows to such an inclination that the intestines will gravitate toward the diaphragm, so that when expiration takes place the rectum will become patulous, and the surgeon can see distinctly as far as the sigmoid flexure. This mode of examination, he informs us, was suggested by Dr. Marion Sims' "Diseases of the Rectum, 1882."

I was not aware of the fact that Dr. Sims had resorted to this mode of examination until my patient had recovered, when I found the above item in a search of a literature of the various methods of rectal examinations. But it should be noted that, in addition to reflected light, I used the electric light. I have employed this means of illumination in oral, throat, nasal, aural, and rectal examinations with such entire satisfaction as to convince me that no other light can surpass it. Sunlight reflected is to be accorded the second place in the order of excellence.

In obscure cases of diseases of the rectum and sigmoid flexure, inversion of the trunk seventy to eighty degrees, dilatation of the anus with Sims' speculum, inflation of the bowels and electric or reflected light (the former is preferable), are indispensable to a thorough ocular examination and diagnosis.

When the ulcer is situated in the descending colon, a rubber tube can be inserted into the bowel through the anus, to the distance of one or more feet, and a medicated injection passed through it to the diseased surface. In such cases I have used a rubber tube, eighteen inches long, with good results. By inversion of the trunk seventy or eighty degrees, the pelvic and abdominal contents gravitate toward the diaphragm; a vacuum is formed in the rectum and sigmoid which become inflated with air under forced expiration; the mucous folds are effaced, and the bowel has almost the appearance of a straight tube; on inspiration the bowel collapses and presents a curved tube, the mucous folds resuming their normal position.

The upper end of the rectum is much smaller than any other part of it, and presents a cavity closed from the sigmoid flexure by virtue of the fact that the circular muscular fibers of the latter act as a sphincter, except during forced expiration and defecation; at such time the rectal cavity and lower part of the cavity of the sigmoid flexure seem one.

Gray's Anatomy, page 806, states that the sigmoid flexure is the narrowest part of the colon. It is situated in the left iliac fossa, commencing at the termination of the descending colon opposite the crest of the ilium, and ending in the rectum opposite the left sacro-iliac symphysis; the distance from crest to the symphysis is three or four inches on the skeleton. The rectum is the terminal part of the large intestine, and extends from the sigmoid flexure to the anus; it varies in length from six to eight inches, and has received its name from being less flexuous than any other part of the intestinal canal. It commences opposite the left sacro-iliac symphysis, passes obliquely downward from left to right to the middle of the sacrum, forming a gentle curve to the right side; it then descends in front of the lower part of the sacrum and coccyx, presenting a curve with its concavity forward, and near the extremity of the latter bone inclines backward to terminate at the anus. The rectum is cylindrical, not sacculated like the rest of the large intestine; it is narrower at its upper part than the sigmoid flexure, gradually increases in size as it descends, and immediately above the anus presents considerable dilatation. It is capable of acquir-

ing enormous size; when distended it is funnel-shaped.

The bill of Sims' speculum is two to four inches long, convex on the outer, concave on the inner surface; the lower third of the rectum is one to one and a half inches long; after passing forward in the manner of the middle third, it passes backward to the anus; it is therefore easy to see if the sphincter ani is dilated or weak and dilatable, how with the speculum the anus and the lower part of the rectum can be re-tracted posteriorily, making the posterior wall comparatively straight; then a blunt sound or applicator (the bladder being empty) may be passed along the anterior wall of the rectum, pressing it forward, or by inflation on expiration, thus removing the convexity of its posterior surface, which naturally, or during normal respiration, fits into the concavity of the anterior surface of the posterior rectal wall, and making the anterior or recto-vesical wall straight; still holding this wall forward, it being quite mobile, and, holding it also out of the way with the recto-vesical wall at the same time, light is readily reflected into the rectal and sigmoid cavities. "The sigmoid flexure has great mobility; with the hand introduced into the bowel a point above the umbilicus has been reached." In the discussion of the case of ulceration of the sigmoid flexure reported by me at Winchester, Ky., Dr. Pinckney Thompson "thought the claims of the reporter almost impossible," viz., that he could see the sigmoid flexure or pass a tube or bougie beyond this point. Dr. David Yandell thought it impossible, Drs. Wathen and Wm. Bailey thought it possible and the procedure feasible, and that Dr. Carpenter had illumined and seen into the sigmoid cavity. Mr. Wales, in *Gaillard's Medical Journal*, p. 385, Vol. xxxii, No. 4, April, 1884, states that O'Bierne, Rilliet, Cadge, and Simon, concluded that a bougie could not pass into the descending colon. Wachmuth, on the other hand, claims to have reached a depth of 166 to 196 centimeters, or five feet five inches, to six feet five inches. Storer reported cases in which he believed he had reached the cecum, after five feet (151 centimeters) of a bougie had passed into the anus.

Mr. Wales further states: "I have rarely failed to pass it through the sigmoid flexure to near the termination of the descending colon, and on the cadaver I have demonstrated the practicability of penetrating beyond this point; the difficulty arises from the meso-colon fastening the lower end of the descending colon almost immovably in the lumbar region, while the sigmoid flexure from this point curves sharply to the right before plunging into the pelvis. When the bougie attains a depth of forty centimeters its point can be felt in the neighborhood of the umbilicus, especially if the flexure, as sometimes happens, is unusually long and mobile, far away from the locality where the flexure merges into the descending colon. The bougie has, in fact, stretched the sigmoid curve upward and to the right, thus rendering the angle it makes with the colon altogether sharper and quite impassable. In order to arrive at this angle with the bougie, it is necessary to depress its point into the left lumbar region by one hand externally to the abdomen, while using the other hand to propel the instrument." Dr. George Hunn, of Junction City, Ky., had a patient, a boy, with intra-pelvic tumor. The latter pressed on the sigmoid flexure, making it impossible for the patient to pass a stool, or even gas, without passing a hollow tube into the colon daily to give temporary relief. Injections were given through this tube, and all gases, liquids and feces escaped through it. The tube on its distal end, or head, had the form of a snake's head, was slightly flexible, and curved so as to readily take the direction of the descending, transverse and ascending colon, after passing the sigmoid flexure; it was three feet six inches long and half an inch in caliber.

Dr. Hunn continued this treatment daily for many weeks, the colon and sigmoid flexure were greatly distended, one or more times the normal caliber of each. The tube passed easily and could be felt in different parts of the colon, even to the cecum, by the hand on external palpation. The patient finally died of exhaustion. Ocular examination of the cavities of the rectum and sigmoid flexures, though one is expert in handling instruments and focusing reflected light on the parts to be seen, is no easy feat to accomplish. The subject to be examined should be slender and lean or emaciated, and willing to bear some slight pain and discomfort in the accomplishment of inspection; the sphincter ani should be previously dilated or relaxed and dilatable, as was the case with my patient. If sunlight is reflected into the rectum the head of the patient should be toward the sun, if gas or coal oil light be employed it should be to one side—the left is preferable. The trunk must be inclined to the left side and inverted to an angle of 70 or 80 degrees and the thighs flexed; both should be supported on hard pillows. The speculum (Sims') is introduced into the anus and rectum, retracting the former, the lower and about half of the middle third of the latter, with the coccyx. The nates must also be retracted. The anterior rectal wall, or retrovesical wall, and anterior wall of sigmoid flexure are to be pressed forward by the blunt-pointed sound or applicator, or by inflation of air, out of the way, the retraction of the anus and rectum pressing the anterior rectal wall and anterior wall of the sigmoid flexure forward. The reflection of light or use of the electric lamp introduced within the bowel must be done simultaneously with forced and prolonged expiration. Mr. Mc. was examined in all ten times by this method; the last examination was on April 1, 1886. After my return from Winchester, Ky. (Kentucky State Medical Society) the patient was again examined. Neither sunlight nor electric was available this time, and lamplight had to be reflected into the bowel. The afternoon was hot, and the room had to be darkened, which increased the heat. The patient was much stronger and fleshier than on previous examinations. The sphincter ani was also stronger and more difficult to retract. Mr. Mc. complained greatly of heat, pain in anus, difficulty in breathing, and had profuse epistaxis as well as free diaphoresis. This inverted position of trunk in persons who are old or have atheromatous blood vessels, diseased lungs or heart, might lead to disastrous consequences. The examination was not completed and no more will be made in this way during the hot weather. Frequent examinations of the above reported case justify the following statements: 1. The function of the sigmoid flexure is a receptacle for the feces as they pass from the descending colon, being closed at its lower end by circular muscular fibers separating the sigmoid cavity from the rectum. 2. The shape of the sigmoid flexure lessens or breaks the force of gravity in the feces downward; if the bowel at this point was a straight

tube the intestinal contents would descend at once to the anus and cause continual inclination to defecate in the sitting or erect position. 3. When the sigmoid flexure becomes filled normal reflex action by the spinal nerves is produced, causing contraction of the circular muscular fibers and retraction of the longitudinal muscular fibers, by which the length and lumen of the bowel are made less above; the circular muscular fibers of the lower end of the sigmoid flexure and those of the rectum, the sphincter ani included, relax, and with the volition of the patient defecation is accomplished, the lungs being inflated, and the diaphragm and abdominal muscles contracted, thus lessening the contents of the abdominal cavity. 4. Physiologically the rectum is a closed and empty cavity (except during forced expiration and defecation), and separated from the sigmoid cavity above by contraction of the circular muscular fibers of the latter at its lower end. 5. The rectum has the following mucous folds, viz.: The longitudinal fold at the lower part of the bowel, and Houston's folds, each being a half inch wide and semilunar in shape, generally three or four, sometimes only two. One is situated on the right side of rectum near its upper end; one on the left side lower down. The anterior and largest one on the anterior rectal wall, opposite the base of the bladder, the posterior fold on the back wall of the rectum an inch from the anus. 6. These folds, with the circular muscular fibers of which the sphincter ani is composed, together with the levator ani and coccygeus muscles, support or act as a pillar to the sigmoid flexure when it is filled with fecal matter. 7. When defecation is postponed, though the desire is present and urgent, and feces have passed into the rectum, the latter by contraction of its circular and longitudinal muscular fibers (the mucous folds acting as valves or elevators) returns the feces to the sigmoid cavity. 8. After the desire to defecate is passed, the rectum is found to be empty. 9. But, should defecation be habitually postponed from day to day, or two or three times a week, though demand is urgent, the bowel gets habitually distended after a time, fails to contract or retract, and the rectum then, instead of being physiologically empty, becomes pathologically distended and relaxed. 10. Constipation or diarrhea would then cause the same relaxation of the involuntary muscular fibers. 11. Distension of the bladder causes its posterior or recto-vesical wall to project far into the concavity of the sacrum and rectum. 12. When the suprapubic operation of lithotomy is done, the rectum is filled with sponges to push the floor of the bladder (recto-vesical wall) up, or raise the bladder upward and forward, thereby causing the distended viscus to rise high above the pelvis, drawing the peritoneum out of the way and increasing the space for the suprapubic incision. Both of the latter conditions prove the ease with which the anterior wall of the rectum can be moved and held out of the way in ocular inspection of the bowel.

We want to deal fairly and justly with Dr. Kelly, but are at a loss to know why he should have remained silent eleven years on the knee-chest posture (Sims) and never published anything, though claiming to have done work in this line eleven years ago. For sake of argument; allow that Dr. Kelly was using reflected light in the rectum, eleven years ago, still Dr. Sims has the priority of one or more years and is the originator of the knee chest posture, and rectal illumination with reflected light. The writer's or Carpenter's position of examination and illumination of the rectum and sigmoid cavity is new and entirely original with him; worked out on a new and independent line of thought and originality, peculiar to himself, different in position of patient and different light used, viz.: electric and sunlight reflected from head mirror; Sims' nor Kelly mentions electric or sunlight, and in 1882–3–4 electric light was not used for diagnosis in medical and surgical practice.

From Nov. 30, 1885 to April 1, 1886, the rectum and sigmoid cavity were illumined and seen into ten times by the writer in ———, 1896, the writer in consultation with Drs. Ramsey and Caldwell, of London, Ky., illumined the rectum and sigmoid cavity; patient Mr. Y. in the Carpenter posture with entire satisfaction to himself; Drs. Ramsey and Caldwell saw twelve inches and measured fourteen inches into sigmoid; instruments used every time in the Carpenter posture are Sims' speculum, a sponge holder with long handle and long wire applicator, head mirror and sunlight, electric light or coal-oil lamp, position easy and simple, no harness used, instruments few, plan original and feasible.

Prof. Howard Kelly states in *Annals of Surgery*, April 1895: "For the past eleven years I have been in the habit of examining the rectum by means of a speculum and reflected light with patient in the knee and chest posture." This same method was used by Dr. Sims in 1882, and confirmed by Messrs. Allingham and Bryant, and said position was original with Dr. J. Marion Sims and not Dr. Howard Kelly, for Dr. Kelly's first publication was a preliminary one, was in the Johns Hopkins Hospital *Bulletin*, December, 1894. We learned that Dr. Kelly did not publish anything until twelve years after Dr. Sims had published the knee-chest posture for rectal examination, and nothing is said by either gentlemen of having illumined and seen into the sigmoid cavity, but to the sigmoid cavity by Dr. Marion Sims; the writer wrote Prof. Howard Kelly for his first article on rectal illuminations, and in reply received his article published April, 1895, *Annals of Surgery*.

In the *Annals of Surgery*, 1895, Dr. Kelly titles his paper "A new method of examination and treatment of diseases of the rectum and sigmoid flexure," but really this was not a new method, for Dr. Simms suggested it in 1882, and the writer, Dr. Carpenter, demonstrated his method, and which was entirely new and original with himself, Nov. 30, 1885, read before the Kentucky State Medical Society in June, 1886, and published in the *American Practitioner and News* in August, 1886; nine and ten years respectively before Dr. Kelly recorded in print his or the Marion Sims posture.

LETTERS TO DR. J. G. CARPENTER:

BALTIMORE, May 22, 1895.

Dear Dr. Carpenter:—I have read your article with great pleasure, and wish I could meet you personally, and talk over the many things which interest us in common. I was particularly interested to see the way in which you diagnosed and treated your case of rectal ulcer. It fully bears out all you say about originality and genius of men who are thrown on their own resources. Sincerely yours,

HOWARD A. KELLY.

Dr. Kelly has misquoted from my letter. I wrote him of "Ulcer in Sigmoid Cavity;" neither of my patients had "rectal ulcer." It is unfortunate for Dr. Kelly and myself both that he should have substituted "rectal ulcer" for sigmoid ulcer, as some reader might think I had written him of the former, instead

of the latter, and might think Dr. Kelly was first to see into the sigmoid cavity, instead of the writer.

BALTIMORE, June 13, 1895.

Dear Dr. Carpenter:—It will give me pleasure to refer to your original work in the field of rectal examination and treatment the next time I write about the subject. I think we will have to share the discovery together, as, if you will notice the first line in my article, I stated that I have been using the method of examination for eleven years past. It is clear that we, both of us, independently of each other and about the same time, arrived at a very important means of diagnosis and treatment in an obscure class of diseases.

Sincerely yours, HOWARD A. KELLY.

In Dr. Kelly's second letter, he again misquotes and refers to my "original work in the field of rectal examination and treatment," when he should have stated "original work in the field of sigmoid examination and treatment."

The writer can not see why Dr. Kelly should want to share the discovery with him (Dr. Carpenter), when the latter published his discovery more than eleven years ago, and Dr. Kelly claims to have done this about eleven years ago, but did not announce his until December, 1894, Johns Hopkins Hospital *Bulletin*, and April, 1895. Why he should have kept his light under a bushel for eleven years is certainly a mystery to the profession. Furthermore, what Dr. Kelly claims, belongs to J. Marion Sims of New York, 1882, who suggested examination of the rectum in the knee-chest posture, with reflected light. Only the guy-posts, the hobbing bandage, kicking straps are original with Dr. Kelly.

We are surprised that he has not added a surcingle with an over-check, or martingales, to complete the outfit of surgical harness, all of which are entirely unnecessary in the Sims or Carpenter posture.

It is very *clear* that Dr. J. Marion Sims suggested rectal illumination and the knee-chest posture in 1882. It is also *clear* that Dr. Carpenter made his discovery Nov. 30, 1885, independent of Drs. Sims and Kelly, before he had read Allingham's work on diseases of rectum, or Bryant's Surgery. Again, it is *clear* that Dr. Carpenter did not know that such a man lived by the name of Dr. Howard Kelly, until 1887 (June). But it is not *clear* that Dr. Howard Kelly was in the habit of examining the rectum by means of a speculum, with patient in the knee-chest posture with reflected light. This is Sims', not Kelly's originality, and it is clear that Dr. Carpenter did "arrive at a very important means of diagnosing and treatment in an obscure class of cases." If Dr. Kelly did, he has not proven it, and has only made an assertion which yet remains to be proven. Dr. Kelly graduated in 1882, and doubtless was not practicing rectal specialism before he graduated.

CERTIFICATES.

I, Joseph McClure, do hereby certify that on Nov. 30, 1885, I was inverted on my head and left shoulder, hips elevated, by Dr. J. G. Carpenter and his assistants of Stanford, Ky., who with the aid of the electric light and head mirror, was enabled to illuminate the bowel, and see an ulcer located in the sigmoid cavity ten inches from the anus, and treated the same; and that these examinations and illuminations of sigmoid cavity, ocular inspection, and applications were made to the ulcer with a long applicator, and that coal oil light and sun light were also used for illuminations at different times.

April 28, 1896. JOSEPH MCCLURE.

Witness: J. H. Hutchings.

To Whom it May Concern:—This is to certify that I was present along with Dr. J. G. Carpenter of Stanford, Ky., examined Mr. Tilfred Yaden; and that we were enabled to see into sigmoid cavity twelve inches, and with applicator to measure fourteen inches, by illumination of same with head mirror light from an oil lamp, the patient being inverted, resting upon head and left shoulder, and nates suspended in air by elevation with pillows.

R. T. RAMSEY, M.D.
Sec'y Southeast Kentucky Medical Society.

DISCOVERIES.

From reading of Dr. W. Rubeska's Criticism on Prof. Howard Kelly and his discoveries in the Domain of Urinary Diseases:

It appears that Professor Kelly has appropriated to himself catheterization of the ureters, which was done by Pawlik at Prague in 1887, taught Professor Kelly there in 1888, and showed him (Kelly) his (Pawlik's) different metallic and elastic ureteral catheters, made by Leiter of Vienna. Pawlik also explained to Professor Kelly his (Pawlik's) new and then unpublished method of inspection of the female bladder. In the year 1889 Kelly was again a guest at Professor Pawlik's clinic and he then became acquainted with the endoscopy of the female bladder as practiced at that clinic. Kelly, after he had become acquainted with Pawlik's method, now also began to busy himself with this subject and published a series of papers in which he gradually appropriated Pawlik's urethral catheter and also endeavored to represent Pawlik's cystoscopy as his own invention. It is this which induces me to stand against Kelly and to defend the work of Pawlik as the property of *his* genius.

And in the Annals of Surgery, 1895, he has endeavored to represent J. Marion Sims' rectoscopy as his own invention. The writer has not added a slit, or handle, or changed the point; added a stopper, or chained it to any instrument, nor straightened or curved one and called it his own. All gentlemen should and can only stand on the truth. We are told the glass catheter and so-called Kelly pad are foreign inventions, only introduced into America by Professor Kelly; the strap on the pad may be his.

Since Dr. Kelly has appropriated Professor Pawlik's discoveries and inventions to himself, also Dr. Sims' rectoscopy, it is self-evident to the writer that he wants to claim Carpenter's sigmoidoscopy, and perhaps the earth. We pause in astonishment and ask, should Professor Kelly find Noah's ark and make a new window in it, would he not call the ark Professor Kelly's. Should he catch the *dove* that brought the olive leaf, and pluck a feather, would he not call it Professor Kelly's dove? We leave the reader to decide whether the Johns Hopkins professor or the Kentucky backwoodsman is the author of sigmoidoscopy.

Professor Kelly's sigmoidoscope are Fergusson's old uterine cylindrical speculums made with an obturator reduced in size and elongated, or the urethrascopes enlarged and lengthened, and handles placed on them, all of which are unnecessary to do sigmoidoscopy and rectoscopy.

Kelly's conical sphincter dilator and his sigmoidoscope are non-essentials, superfluities of instrumentation, and seem to be only a freak of Professor Kelly's imagination. The surgeon who knows how to do rectoscopy and sigmoidoscopy does not need Professor Kelly's modifications of other men's instruments; and he who can not do this line of work without these should not engage in this practice.

The great essentials in rectoscopy and sigmoidoscopy are: 1, the Carpenter posture, no anesthetic is required; 2, the J. Marion Sims' speculum or Harry Sims' speculum; 3, one long-handled sponge holder; one long wire applicator; 4, head mirror; 5, sun or artificial light; 6, dilated or dilatable sphincters.

ADDENDUM.—The writer thought Dr. Howard Kelly would have been present in the surgical Section of the AMERICAN MEDICAL ASSOCIATION and contended in debate for originality in sigmoidoscopy and rectoscopy had he been entitled to it. But Professor Kelly left Atlanta about twelve or twenty-four hours before the writer's paper was read. Here in the surgical Section was the place to settle the priority of claims and originality of sigmoidoscopy in the presence of surgeons and physicians who could see, think and hear for themselves, and must be our judges. We are reminded of the adage, "He who fights and runs away lives to fight another day." We are of one conclusion, that Professor Kelly did not have, nor has he, the facts to sustain him as the author of sigmoidoscopy and rectoscopy, and that rather than suffer defeat he folded his tent and silently went away.

BALTIMORE, Oct. 14, 1896.

Dear Dr. Carpenter:—I am just writing an article including some account of rectal examinations for the *Centralblatt f. Gynaekologie*, which has the widest distribution of any gynecological journal in the world. In it I shall make careful note of your original work published in the *Cincinnati Lancet-Clinic*, Feb. 23, 1895. I am sorry not to have been able to give the matter more prominence at an earlier date, but it is utterly impossible for me to get through the work which is driving me every hour of the day, and important matters sometimes do have to wait.

Remember that I shall always be glad to see you and show you any courtesy I can here in Baltimore, and when I treat the subject of rectal examinations before my classes your name will always occupy a prominent position as a pioneer.

Sincerely yours, HOWARD A. KELLY.

Cincinnati *Lancet-Clinic*, Feb. 23, 1895, is the second publication of my sigmoidoscopy, the first publication being June, 1886, and August, 1886, before the Kentucky State Medical Society and in the *American Practitioner and News*.

A SYSTEM FOR THE RATIONAL TREATMENT OF INJURIES BY FOMENTATIONS.

BY CHARLES DEWEY CENTER, M.D.
LATE HOUSE SURGEON PRESBYTERIAN HOSPITAL, CHICAGO, ILL.
QUINCY, ILL.

The treatment of injuries by applications of either hot or cold moisture is not a new procedure. There has been, however, a revival of this practice in the past ten years. Listerism is largely responsible for the renewal, and the development of our bacteriologic knowledge combined with our clearer physiologic insight, has given it the impetus toward the position it now holds. These applications of moist heat or cold were formerly known as stupes, but this term is now confined more especially to applications of turpentine, etc., or perhaps a better way to express it, to medicated fomentations applied to strictly medical cases.

There is no doubt that wound treatment by moisture is sometimes overdone, that it is often used with plain empiricism; that hot moisture is used where cold is indicated and *vice versa*, for very little has been written to guide the practitioner, and a doctor does not collect knowledge of fomentations and their uses by intuitional imbibition any more readily than he does other information of a professional character. Hydrotherapy has much of value concealed among its masses of uselessness and harmfulness. All believe that a kidney well flushed each day is of more benefit to the individual than one clogged with urinary salts. We do not doubt that a clean, well bathed skin is both more useful and more ornamental than a greasy, dirty one, whose pores are filled with disfiguring blackheads. So wound treatment by moisture is rational and has come to stay, since it is based on physiologic and therapeutic facts.

The healing and cleansing properties of water have long been known; so long, in fact, that animal instinct teaches our four-footed and two-footed friends its virtues. We have merely added the knowledge of the difference in action between the hot and the cold. Dogs have been often seen to resort to water in case of injuries. One instance, reported by a reputable doctor, is on record. His dog, belonging to the spotted coach variety, was run over one day by a wagon. The dog was pushed along in front of the wheel for some distance, lacerating the soft tissues of the legs and the hips, but owing to an unevenness of the pavement, had no bones broken. Howling with pain the animal ran to a stream near by, waded into the shallow water, lay down and could not be persuaded to leave it for about seventy hours. The record is made complete by the statement that no inflammation resulted from the wounds and that the dog made an extremely rapid recovery. Water in some form is being used more and more extensively in fevers. Where once the family doctor sternly and solemnly assured the anxious family that cold water, either internally or externally, meant death to the patient, in one case by driving the fever in and the other by driving it out, there is heard now the command to sponge, or cold pack, or ice pack, when the temperature passes a given point. Permission is given to drink as freely as desired. If water, either hot or cold, or both, are useful in systemic inflammations why not in local ones. In one the disease is general, in the other local, and if there is any virtue in the water one would certainly look for its greatest benefit in the local ailment.

There is one feature of this modern hydrotherapy to bring out more clearly: the difference in the action of hot and cold moisture, and a caution against using either indiscriminately. Moist heat acts on inflamed tissue the same way as the removal of a rubber band from the finger acts on the throbbing sensation present before the removal. It dilates the cutaneous vessels, softens the general mass of tissue, allowing the capillaries and arterioles clogged with red and white corpuscles, to free themselves, permitting the process of osmosis to be enacted backward this time, and causing the intercellular stasis of serum or lymph to disappear.

Either heat or cold at first touch, acts as a constrictor or constringer of tissue, causing momentary pain in the congested area. Either the moderate, continued, hot application or the cold one dilates cutaneous vessels. The intermitting, long continued form of either constricts them. Moist heat promotes activity of the leucocytes by increasing their ameboid movements, and hastens suppuration in this way. Then, too, in an inflammation the fixed tissue cells proliferate and accompany the leucocytes in their tissue infiltration. Pathogenic microbes find the artificially warmed atypical area a fruitful spot, consequently suppuration speedily and easily ensues. Of course, in some cases this tissue infiltration reaches such an extreme that a true avascular area is caused by the pressure, and a patch of necrosis results, a frequent condition in the pathologic condition known as furuncle. Here also moist heat is favorable to resolution, since it hastens the separation of the necrotic tissue.

The cold fomentation, while intrinsically perhaps more valuable than the hot one, will in the practice of many find a more restricted usefulness, since cold must be used when inflammations are young or before the inflammatory process has commenced. The matter of cold for local calor is not a serious one, although patients frequently mislead the doctor by insisting that there is so much heat in the inflamed part. Local temperature is rarely any higher and usually not so high as body heat. It is caused entirely by increased blood supply to the part, in all cases where the systemic temperature does not also rise, the latter being caused by the toxicity of ptomains, or by the not understood physio-chemic product, fibrinogen.

Application of cold is dangerous in cases of extreme congestion, in strangulated hernia and in any instance where the blood supply is already diminished or shut off. The Thompsonian doctrine that, "heat is life," must be believed and practiced in these cases. Cold acts in much the same way as elevation of a part. It reduces the amount of blood in the deep vessels, assisting the return of this diminished amount by dilating the cutaneous ones. Cold decreases vitality and all the vital processes, a fact recognized in our using heat instead of cold in shock. Where heat hastens suppuration cold retards it by constringing tissue; also by delaying or inhibiting the action of pus microbes.

There is no absolute and undeviating rule for the use of hot and cold fomentations. Idiosyncrasy plays a large part; mental impressions or dislikes a smaller one. Some time ago a case of appendicitis came under my notice. He had been complaining of pain for three days; had a temperature of 102.4 degrees F., there was considerable rigidity of the abdominal muscles, dullness on percussion in the region of McBurney's point. An ice bag was ordered for this spot, absolute quiet enforced and to make him think something was being done for him, as much as for any other reason, he was given benzo-naphthol, 5 grains, three times a day. For six days he lay on his back with the ice bag over his affected locality, and he got well. Some time after, another patient with appendicitis came in. It was in the beginning of her attack also. The ice bag was ordered again, but this time the patient declared it increased the pain, increased the vomiting, and it had to be left off. The only explanation that can be given for these cases, is, that there are exceptions to the rules governing the effect of heat and cold on the vaso-constrictors and vaso-dilators, as well as to all other rules.

One proof of the constringing effect of cold upon deep blood vesseis is the test of Brown-Sequard. Ice placed over the lumbar region and kept there, first checks and afterward stops the secretion of the kidneys. The laity know of this effect of cold without knowing how it is obtained. They say a warm bath opens the pores and that the bather will catch cold unless he follows with a cold plunge or sponge, which closes the pores. They also know that cold fomentations, or an ice bag, are good for incipient tonsillitis. On the other hand, the backache of many women is relieved by a hot bath along the spine, the ache being the result of cord anemia and the heat producing a physiologic congestion. The opposite condition and result obtain with the use of ice in cerebral congestion.

Concerning the value of medicated fomentations, and by this term is meant those of boric acid, acetate of aluminum, sulphate of aluminum, bichlorid of mercury, sulphate of zinc, carbolic acid, lead and opium, or opium alone, this may be said: Theoretically they are all right. The boric acid more nearly fills the requirements of all cases than any other. It has the advantage of not being dangerous. Carbolic acid is decidedly untrustworthy under all circumstances as a fomentation. One case where it was used comes to mind. The patient was a man of ordinary intelligence. He had a boil at outer end of right eyebrow. It was opened, the compartments broken up with the end of finger and washed out with 2 per cent. carbolic solution. Then, having nothing else by me, I put on a hot wet dressing of the same solution, telling him to remove this when he reached home, only four blocks, and to apply fomentations of hot water until he went to bed. The carbolic acid made his aching face feel so good he decided no improvement could be made, so left the dressing on all night. Result, considerable superficial necrosis and sloughing. The acetate of aluminum enjoys a good but narrow reputation. Senn advocates it above all other fomentations, and it is at once non-toxic and seemingly has no effect on idiosyncrasy. Sulphate of aluminum had better be left alone. It has an insidious way of removing the body of skin down to the rete, giving no sign of doing so beyond a slight tingling sensation on the part of the patient. Bichlorid of mercury must be employed very cautiously and its use not continued. Sulphate of zinc, unless used in a very dilute solution, is extremely painful to the patient when used over broken skin. Lead and opium are not used so extensively as they were some years ago. The combination is an incompatible on its face. Whether they became unfashionable preparations or whether some untoward results were obtained we do not know. There is no literature on the subject. The employment of the lead and opium wash in hot fomentations gives this result: The lead acetate hinders the conversion of uric acid into urea and favors the deposit of sodium urate about the joints. If long continued about open joints or open bone injuries, there is an increase in the diameter of the bone, or in fractures an unusual amount of callous, which later becomes infiltrated with osseous material. The opium, on the other hand, gives local results that are very desirable, if it is used in small amounts moderately; it must be used early before any degree of inflammation has been reached, for like cold it raises arterial tension, helps to maintain the blood current and hinders the migration of the leucocytes.

Fomentations of one or another kind are frequently preferable to submersions, because of the greater convenience; because submersion, if long continued, tends by great absorption of the fluid to an edematous, spongy condition of the part, and because fomentations allow the patient greater freedom of position.

In conclusion, it may be said that it is just as necessary to make an accurate diagnosis of the existing condition, for the successful use of fomentations, as it is for the successful use of any drug or of an operative procedure.

527 Lind Street.

The number of medical students in France has materially decreased since the more stringent regulations went into effect this year, dropping from 8,996 to 8,485, a difference of 511. The new regulations were described in the JOURNAL August 22, page 450.

OBESITY AS A CAUSE OF STERILITY.

Read before the Second Pan-American Medical Congress at the City of Mexico, Nov. 17, 1896.

BY JOHN V. GAFF, M.D.

TUCSON, ARIZONA.

In all ranks of life there are two well marked forms of senile decay; and every one will at once, I think, recognize the truth of the following sketch by Paget:

"Some people, as they grow old, seem only to wither and dry up—sharp featured, shriveled, spinous old folks, yet withal wiry and tough, clinging to life and letting death have them, as it were, by small instalments slowly paid; such are the 'lean and slippered pantaloons' and their shrunk shanks declare the prevailing atrophy."

Others, women more often than men, as old and as ill nourished as these, make a far different appearance. With these the first sign of old age is that they grow fat, and this abides with them till, it may be, in a last illness sharper than old age, they are robbed of even their fat. These too, when old age sets in, become pursy, short winded, pot-bellied, pale and flabby; their skin hangs not in wrinkles, but in rolls and their voice instead of rising toward childish treble, becomes gruff and husky.

Now these classes of old people may represent the two forms of atrophy. Atrophy by decrease and that by degeneration of tissue, to which we shall find nearly every part of the body liable.

Given an obese woman, we will find an excessive accumulation of fat in the adipose tissue, hindering and finally rendering impossible the function of the various organs of the body.

The distribution of this accumulation of fat is seldom uniform, being sometimes in one part of the body and sometimes in another. Particular organs may be greatly encumbered, while others experience very little impediment.

But there is a close relationship between the condition of the internal cavities and that of the subcutaneous areolar tissue, so that an extensive accumulation of fat beneath the skin may be accepted as sufficient evidence of a similar internal burden.

Under normal physiologic conditions of nutrition, the adipose tissue of the body stores up only that amount of fat which is needed for the continuous supply of fatty matter to the tissues of the body. Adipose tissue is present or may be formed wherever there is connective tissue, except in the lungs, spleen, sheath of the penis and in the brain. In the normal condition, it forms about one-twentieth of the total weight of the body.

According to Lyman, the physiologic store of fat is normally recruited from the fats that enter the circulation, either in the form of an emulsion or in derivative combination, forming glycero-phosphoric acid, fatty acids and soaps. A portion of the fat is held in solution by the soaps that are formed through the action of fatty acids upon alkalin bases in the small intestines.

Glycerin and the fatty acids are produced by the action of the pancreatic juice and bile upon fat. The liberated glycerin enters into combination with phosphoric acid that has been displaced from the alimentary phosphates by the hydrochloric acid and soap of the gastric juice. Thus formed the diffusible glycero-phosphoric acid and soap pass readily into the general circulation, while the emulsified fats find their way through the lacteals and the thoracic ducts into the venous current of the blood. Reaching the tissues, the glycerin and fatty acids are readily oxidized, while the stable emulsified fats are deposited in the adipose tissue for a more gradual disintegration.

If the fat be introduced into the system beyond the capacity of the soaps and other alkalin salts to hold it in solution, the surplus remains suspended in the form of minute oil globules, giving to the circulatory fluid an oily appearance. This excess constitutes what is termed lipoemia. Under such circumstances, at the ordinary rate of oxidation within the tissues, the surplus fat can not be oxidized and it accumulates in the cells, in and around the uterus, ovaries and other organs and adipose tissues.

When the supply of fat in the blood is too great to be disposed of by immediate oxidation or by deposit in the adipose tissue, it must find its way out of the body. The sebaceous glands of the skin excrete excessively, hence that disagreeable greasy appearance of the hair and skin and eruptions of eczema and acne in the anemic and victims of irregular menstruation.

Among the causes of obesity, Blanchard has noted excess of eating and drinking in about 40 per cent. of the cases; in about 37 per cent. there was a deficiency of exercise, but in 20 per cent the exercise was extraordinary, and in 10 per cent the quantity of food was less than the normal amount.

Hereditary influences play a very important part in the evolution of obesity, 50 per cent. of such cases being due to this cause. Hereditary influences that predispose to arteritic disease, retardation of nutrition due to rheumatism, gout, gravel, biliary lithiasis, asthma, acid dyspepsia and kindred diseases. Through many successive generations these diseases may be traced, either associated at the same time in the same subject or occurring in alternation with each other, leaving numerous obese and sterile women in their wake. The preponderance of opinion is with the idea that more frequently an excessive amount of adipose tissue is caused by the ingestion of saccharin and starchy food than by the consumption of fat; in many cases it can be traced to acid dyspepsia, since the action of the pancreatic juice is greatly impeded by excessive acidity in the small intestines; the fats are then absorbed in the form of an emulsion instead of being split up into glycerin and fatty acids. Emulsified fats have a great tendency to become more or less permanently stored up in the adipose tissues, and favored by sedentary habits, malt liquors, etc. Lyman says that the development of anemia and obesity is favored by small but frequent losses of blood; the diminished current of blood can not transport a sufficient amount of oxygen; the exchanges upon which nutrition is dependent are consequently retarded and obesity developed. In like manner the disease frequently accompanies pregnancy, excessive menstruation and lactation, especially if the patient leads a luxurious life and gratifies an appetite for alcoholic beverages and sweet articles of diet. An insufficient oxidation of that in the tissues has been made prominent as one of the causes of obesity. As a consequence of obesity, the internal organs like the uterus, tubes, ovaries, kidneys and pancreas may be completely buried in masses of fat. The liver is enlarged, its borders loose their sharpness, its color is pale and oil oozes from an incised surface; the hepatic cells are gorged with fat, but they are not in a condition of fatty degeneration, and the connective tissue by which they are surrounded is not invaded by fatty particles.

The secretion of bile is greatly diminished, and the gall bladder and large ducts are often found empty, or contain nothing but mucus. The diaphragm is forced upward by the immense masses of adipose tissue that crowd the abdominal cavity. The thoracic cavities are also diminished by the presence of fat in the mediastinal spaces and under the pericardium and pleura. A proper expansion of the lungs is thus prevented, lessening the amount of oxygen given to the blood and thereby increasing the existing condition. Owing to the minute particles of undissolved fat, the amount of oil in the blood may be four or five times greater than it should be, or five or six parts per thousand of the circulatory fluid. The amount of hemoglobin in the red blood corpuscles do not fall below the normal limit.

The blood can not take up and transport a sufficient supply of oxygen under such conditions, and consequently a sense of breathlessness, wheezing, etc, is often experienced.

I have thus given a pen picture of the general condition and have thus described the condition of the liver more closely, to show by comparison the condition of the ovaries which are in exactly the same state, except that the anatomic construction is somewhat different, yet the cause and the results are the same.

The uterus, tubes and ovaries will be found firmly packed into the pelvis and surrounded by layers of fat; the fat cells interspersed between the unstriped muscle fibers and connective tissue surrounding the follicles are so thick and cause so much pressure that it is impossible for the ovum to escape from the ovary; large masses of fat crowding down upon the cervix, bend the canal of the uterus forward, producing an aggravated condition of anteflexion and thereby effectually preventing the entrance of semen to the uterus.

During copulation, the uterine round and broad ligaments by their concerted action cause a suction from the vagina toward the ovaries, greatly facilitating the movement of the semen. When they become encumbered with large quantities of fat, they are then no longer able to perform that function, the semen is then retarded or is lost on its way toward the junction with the ovum in the tube or ovary.

Compression of the tubes by masses of fat obstructing the passage way through the ovarian tubes is another fruitful cause of sterility.

The menstrual blood from fat women is usually pale, scant, watery and poor in fibrin. Amenorrhea and scanty menstruation probably have their origin in the anemic condition of the blood found in obese women who have been afflicted for a long period. The sexual appetite rapidly fails and is often entirely extinguished. Among young girls who exhibit the disease, menstruation usually appears at a precocious age. It is generally irregular, and alternating conditions of amenorrhea are not uncommon, and an increase in the size of the abdomen often leads to an erroneous idea of conception.

The prospects for offspring will depend more upon the menses than upon the amount of fat, which in turn depends upon how great a fatty change exists in the blood, uterus and ovaries. The life of the poorer classes tends to leanness, which calls to mind the old adage "A poor man for children." Leanness only results in sterility when due to starvation or chronic disease.

An obese woman menstruates in varying degrees from a discharge which will soil three or four napkins daily and continue from one to three days, to only the slightest stain of a serosanguinolent nature, which by its color would be difficult to distinguish as menses. It is nearly always less than normal and in most cases consists of a bloody serum containing a few epithelial scales.

Kish has enumerated over two hundred cases of obesity associated with amenorrhea and sterility. In many of the cases there was no other cause to which he could attribute the sterility, but to obesity. Philbert has described five cases wherein pregnancy occurred through adopting a thorough and vigorous system of hydropathic and dietetic treatment. Their ages ranged from 21 to 27 years. Abortions in obese women are frequent. Stoltz has cited a case of an obese woman who had five consecutive abortions to which he could attribute no other cause. Goubert cites the case of a very fleshy woman, having had eight consecutive abortions from the same cause. McKee sums up the subject in the following well chosen words. "Nutrition takes an abnormal direction and the nutritive elements destined to support the product of conception are directed to other points."

The most favorable cases for treatment are subjects under 30 years of age, and who have not been exhausted from frequent child-bearing. Bunson has shown that the offspring from fat women lack vitality, and many if carried to full term do not survive the teething period. The following description of a few cases may prove of interest:

Miss S., aged 16, began menstruating when 14 years old. After menstruating regularly for about one year she began to take on flesh and the flow of menses grew somewhat less, and just two years from the time they were first observed they suddenly stopped. During the last year she had been confined very closely at the bedside of a sick mother and had been eating largely of sweet confections, etc., until her weight had increased in one year from 120 pounds to 200 pounds; the abdomen was quite prominent; and becoming dyspeptic from the abuse of diet she was adjudged pregnant by her family, a nurse and the neighbors. Her step-brother was accused and confessed to having cohabited with her for the past year; they were duly married and in three months the menses again made their appearance, no pregnancy having occurred. Mrs. H., aged 27, married three times, four children by first husband; began to grow fleshy until she attained a weight of 260 pounds. The menses had lessened to half the quantity and from five days to two days duration. Exercise and dietetic treatments reduced her weight to 225 pounds. She then married for the third time. Treatment was continued until her weight was 190 pounds, when she was compelled to desist on account of the extreme weakness, loss of appetite, etc., together with the great annoyance caused from an eruption of pruritus about the genitals, which on account of the intolerable itching made life anything but pleasant, and which refused to yield to remedies until the diet had been changed. The menses increased both in quantity and duration but pregnancy did not occur.

Mrs. B., age 27, weight 215 pounds, married seven years, never been pregnant, began treatment one year ago. Moderately restricted diet, eating very little bread or starchy food, exercising in the open air both by walking and the use of the bicycle and the administration of Parke, Davis & Co's dessicated thyroids. The commencing dose was three-fourths of a grain and gradually increased to 6½ grains, three times daily; her weight was reduced to 147 pounds and she is now pregnant; is enjoying good health with the exception of a slight feeling of languor and weakness.

Mrs. R., age 26, weight 200 pounds; inclined to be fleshy from birth, weight 165 pounds when married at 17 years of age; she has gradually increased in weight until three months ago, or for about nine years. The menses at the time of marriage were regular and large in quantity, but have continued to grow less and less until at the present time she is often in doubt as to whether she has passed the monthly period or not, on account of the extreme scantiness and want of color in the menstrual fluid. The treatment was begun about three months ago, with dessicated thyroids, with the advice to eat little bread or food of a starchy nature and take regular exercise by

walking or the use of the bicycle or both. According to her own words she has eaten whatever she pleased and taken only moderate exercise by walking, but has taken the medicine very regularly; commencing dose was $\frac{3}{4}$ of a grain and was gradually increased until at the present time she is taking $5\frac{1}{2}$ grains of the thyroids three times daily, before meals. She has not experienced any discomfort and has lost ten pounds. There is no perceptible change, but she says she can take much more exercise without so much fatigue and shortness of breath as before the treatment was begun.

I could describe a number of other cases that have come under my observation, but think these four cases which I have described will be sufficient to demonstrate the theory that obesity is a frequent cause of amenorrhea and sterility owing to mechanical pressure and the physiologic changes resulting from an excess of fat in the blood tissues, and is amenable to treatment in well selected cases.

WHAT CAN BE DONE BY ELECTRICITY TO AVOID SURGICAL OPERATIONS IN GYNECOLOGY.

Read before the American Electro-Therapeutic Association at Boston, Sept. 28, 1896.

BY G. BETTON MASSEY, M.D.
PHILADELPHIA.

This is a very extensive subject, even when it is narrowed down, as I have done, to the avoidance of surgical operations in the diseases of women; so extensive indeed as to be capable of only a general discussion in the time at my disposal, leaving the detailed proof of the greater comparative value of electricity to other occasions. A number of books have in fact been written on the subject since the publication of my own work and the only purpose that can be subserved in a single paper is to call renewed attention to the subject and to give additional reasons for a faith that needs the fervor of a missionary crusade among practitioners of medicine. That there is need for a pause and self-examination on the true relation of surgery to the diseases of women is the first point to be established, the second question being the claims of electricity as a superior remedy in the treatment of certain affections.

Surgery appeals to the human mind as a brilliant, spectacular and lucrative occupation; it appeals to the professional mind as a means of cutting out an otherwise incurable disease and remedying mechanical faults quickly and in the best manner. As to which of these motives has predominated in the production of the remarkable surgical furore now prevalent among gynecologists, must be decided by those who care to study motives. The evidence of overwhelming interest in surgery by those calling themselves gynecologists is evident on every hand. Beside numerous special institutions exclusively devoted to this work, many of the greatest general hospitals in this country are given over almost entirely to the performance of major operations on the pelvic organs of women, in some of them four or five such operations being done to one equally grave operation in the combined operative fields of men, children and the other parts of woman. Why is this so? It surely can not be that the pelvic organs of woman are so many times more dead, damnable and useless than all other organs of men, women and children.

Without pausing to consider the motives that have resulted in this remarkable activity, or even the insidious steps by which it has gradually grown to be considered by most of us as the legitimate work of practitioners supposed to be engaged in curing the diseases of woman, but little thought is required to show that it is based on a regrettable misconception of the true nature of these affections and of duties as physicians in their remedy.

The uterus and ovaries of woman possess nerves, blood vessels and lymphatics like other organs of the body; are subject to the same vital activities; vulnerable to the same disturbing agencies, whether traumatic, microbic or reflected; and are blessed with the same defensive armament against depressing and morbific influences. Why then should they be treated as so much carpenter work in which the principles of mechanics alone are to be considered?

The stress laid upon displacements of the uterus as a primary lesion, for instance, not only violates the pathologic facts in omitting consideration of older intrinsic changes in the organ itself, which may better explain the symptoms, but is an anachronism in perpetuating a theory of the origin of engorgement or inflammation which has been superseded by the germ theory of disease.

For it is in the germ theory of tissue degradation, coincident with lowered vital resistance, that we have a key to more than half of the pelvic diseases of women, particularly those accompanied by engorgement and proliferation of the parenchyma of the organs and relaxation and fatty degeneration of their supports. The field of electro-therapy in such conditions is an extremely important one, for the true curative agency is one that stimulates the natural defences and rebuilders of tissue—the phagocytes and trophic nerves—to a renewed activity in removing lingering debris and consequences of the germ-phagocytic contest. It is not that electricity does this by virtue of proven germicidal powers at this stage, but rather by a stimulation of vital processes, and in so doing a vast number of otherwise refractory cases may be permanently remedied.

Per contra, it may be asked in what way are propping, stretching, cutting and sewing operations antidotal to the non-suppurative consequences of microbic invasion?

But if pessaries, slitting, stretching and sewing were the worst indignities that modern surgery inflicts upon these organs they would still be left to the curative efforts of the electro-therapist, and many such have finally been restored to health. Unfortunately the pessimism engendered by the failure of these purely mechanical theories of relief has at last produced its fruit in the shape of therapeutic nihilism, which blindly destroys the very organs themselves. Succeeding and accompanying the cyclonic wave of ovarian destruction and removal, we have another wave of uterine removal, the sacrificial operations of this nature attaining proportions at present that stamp Jack the Ripper as a novice in his work. But two criticisms need be made on this latest evidence of the dangers of specialism unaccompanied by judgment: The final conclusion of the surgical gynecologist to destroy an organ for mere enlargement and displacement is without a parallel in any other department of medical or surgical effort, and demands justification on the two-fold ground of the failure of non-destructive methods as well as its own success; secondly, since it has been found necessary to remove the uterus in the same class of cases for which removal of the uterine appendages has been vaunted as a cure-all, what organ or set of organs will next fall under

the ban when these cases return to the surgeon for a third operation, minus ovaries, tubes and uterus?

To us, wielding artificially a force strained from the circumambient ether, a force that is equally concerned in the chemical affinity of the minutest atoms, the metabolism of organized bodies and the world movements of the universe, such expedients are unspeakably gross. Our efforts may be equally crude and blunt in the eradication of cancer, though I will not even grant this, but when the trouble is a mere errant nutrition, a cellular hyperplasia, representing the disordered condition of a battle-devastated district, the purifying, stimulating and reconstructive effects of electricity are most interesting.

In a word, the advantages of electricity over surgery in all that class of cases due to more or less remote inflammatory conditions, lies in the fact that it is a far-reaching stimulus to tissue cleansing and reconstruction, by which alone a restoration of normal functions is attainable. And this group of cases is by no means small, including as it does endometritis, metritis, salpingitis, ovaritis, pelvic peritonitis and most of the conditions accompanied by displacements of the uterus and ovaries and relaxation of pelvic supports of non-traumatic origin.

On the other hand, surgery is indicated where a true abscess (not a mere collection of mucus in a Fallopian tube) has formed, and then the relaxation of the perineum or of the vaginal walls is due to puerperal lacerations.

Turning to neoplasms, it may be proven that the mortality from fibroid tumors is almost entirely due to surgical operations for their removal. It is impossible to give the exact statistics of this operation. One of the most recent and authoritative works on the subject, that of Pozzi, calculates the percentage of deaths as 28.2 per cent. for the intra-peritoneal method and 25 per cent. for the extra-peritoneal method, the list being made up from the reports of the most skillful operators only. Even if the lowest admitted figures be taken, they mean that one out of every four patients is sacrificed in an unnecessary attempt to remove a benign lump of flesh. This is surely as bad as the celebrated bean drawings of early Texas days when those who drew black beans were shot, the selection of the victims being probably as uncertain. And this three-to-one ordeal is offered as the only alternative when over nine to one, or about 85 per cent. of all such cases can be practically cured in the removal of the symptoms and reduction of the growth by electricity. And it may be added that the remaining 15 per cent. not favorably affected by the electric treatment are still capable of being treated by surgical method, if thought advisable, without the least disadvantage due to the application of electricity.

But this is not all. Referring again to the four cases in which the tumor is removed, one of which ends fatally and three recover, what is the subsequent condition of the three cases that recover from the immediate effects of the operation? In each case the remaining portions of the uterus and both ovaries have been removed, thus destroying the peculiarly feminine characteristics of the individual. They are necessarily neuters in the social economy. Each case is also liable to a rupture of the abdominal wall at the site of the incision, producing a tumor far more troublesome than the original growth, and each is liable to obstruction of the bowels from the operation, and some suffer from pain, nervous disturbances and even insanity.

We look in vain for such after-effects of electric treatment, which almost invariably restores the patient to robust health, even if some portion of the harmless fibrous mass remains in its original situation.

The ultra-surgical enthusiasm should be halted also in the too prevalent method of treating dysmenorrhea, or as I prefer to call it, menorrhalgia, by forcibly tearing apart the muscular and fibrous tissues of the cervix uteri. This treatment is also based on a discarded theory which attributed the pain to a mimic labor to expel accumulated fluid. It has been proven that no such accumulation exists, and the presumption now prevalent is that the pain or cramps is a neuralgic expression of nerves called upon to functionate in the presence of hyperesthetic, congested, inflamed or merely undeveloped organs. While this operation is not deadly, it gives trouble at times, and is far too violent and unscientific a procedure when the abnormal conditions are so easily curable by intra-uterine, or even at times vaginal, applications of electricity. If the pain is due to inflammatory conditions of either the uterus, tubes or ovaries, as it so often is, this operation will aggravate the patient's condition, a number of instances of this unfortunate result having been observed by me.

I shall mention but two other frequently performed operations as additional evidences of too much surgery in diseases of women, capable of simple cure by electricity. The repair of but moderately lacerated cervices receives but little mention in literature at present, but in practice is still too often performed; and the same may be said of the use of the sharp curette. The symptoms in the conditions for which both of these operations is oftenest performed are due to chronic hyperplasia of the uterus, with or without leucorrhea, and are easily curable by electricity if the habit of performing important and expensive operations were not so prevalent.

REPORT OF A CASE OF ACROMEGALY COMBINED WITH GIANTISM.

BY JAMES W. WALKER, M.D.
HOUSE PHYSICIAN, COOK COUNTY HOSPIPAL, CHICAGO.

Since 1886, when Dr. Pierre Marie first named and described this interesting pathologic condition, the literature of the subject has grown progressively larger each year, and the disease is no longer the rarity it was once believed to be, there being now over 130 authentic cases on record. The particular nature of the malady however, its etiology, pathology and clinical course are yet so imperfectly understood it is the duty of all observers to place on record an exhaustive history of each case with which they meet.

J. McI., male, age 16, was admitted to Cook County Hospital, Chicago, Ill., July 16, 1895, to the service of Dr. Jacob Rosenthal, who has kindly permitted me to report the case.

Family history is good. Father, mother, five sisters and three brothers are living, healthy and normal in appearance. All the patient's relatives are of full normal size, none are remarkably large.

Personal history. (This is supplemented by the statements of the mother and an elder brother.) He was born in Illinois of Irish-American parents, and at birth weighed thirteen pounds. The weight of his

brothers and sisters at birth varied between nine and ten pounds. The mother says that nothing remarkable was observed until the patient was 6 years old, when, after an attack of measles, he began to grow at an unusually rapid rate, the development of his hands and feet being especially noticeable. His appetite became ravenous and has continued so to the present time. When 8 years of age he began to suffer from asthenopia, which was progressive in the right eye, so that he was blind in that eye when 14 years old. He is a frequent sufferer from supraorbital neuralgia, and is also subject to attacks of urticaria. He is habitually constipated. During the past six months he has been passing an unusually large quantity of urine, having to urinate several times during the night. He says he has lost about thirty-five pounds in weight during the past twelve weeks. His physical strength has always been disproportionately small in comparison with his size and with that of boys of his age. He perspires profusely, especially at night. His appetite for sweet articles of food, and for candy, is marked. He has never used tobacco. He has not received any education, being now unable to read or write; nor has he had any regular industrial employment. He has some musical ability, playing a few instruments indifferently, but only by ear. This natural gift is possessed by two or three other members of the family. He has also some natural industrial dexterity, being able to clean clocks and watches and put the parts together, repair shoes, etc.

PHYSICAL EXAMINATION.

Weight	111.13	kilos (245 lbs.).
Height	196.5	cm. (6 ft. $5\frac{1}{3}$ in).
Girth of head at level of eyebrows	62.5	"
" " " mento-parietal	72	"
" " " occipito-bregmatic	61	"
" " neck	37	"
" " chest in expiration	102	"
" " " " inspiration	116	"
" " abdomen	112	"
Span of extended arms	215.5	"
Length of hand	26	"
" " " middle finger	14	"
Girth of index finger	9.5	"
Length of foot	36	"
Width "	16	"
Girth of great toe	12.5	"

J. McI.—Acromegaly.

Acromegalic giant and dwarf, both 13 years old.

The general nourishment of the patient is good. The panniculus adiposus is of average amount. The face is more boyish in expression than the age warrants. The general impression given by the patient is that he is a simple, good-natured, overgrown boy. Intellectually he is behind his age by several years. There is nothing indicating imbecility; but his views, his interests and his delights betoken delayed mental development. Seeing him as he towers above those of average stature, with his puerile expression and irresponsible manner, he seems almost unhuman, and one is unconsciously reminded of the monster in Mrs. Shelley's Frankenstein. In temperament he is decidedly phlegmatic. He is docile, obliging and courteous in disposition. He sleeps about eight hours each night and an hour or two each afternoon. There is

no true incoördination in his gait, but he "rolls,' in walking.

His forehead is well shaped. The predominating feature of it is the excessive prominence of the superciliary ridges, which gives a receding appearance to the forehead. The mastoid processes are unduly large; the cheek bones are slightly prominent, the lips a little full and the nose a trifle larger than the proportionate size. It is worthy of especial note that the lower jaw is perfectly proportionate in size to the head and is normal in shape. There are twenty-seven sound teeth, which are small; the incisors and canines are not in contact laterally; none of the wisdom teeth are erupted; the dental arch is markedly narrowed in front; the tongue is of normal size; the hair is brown and soft. Eyes blue; ophthalmoscopic examination

Acromegalic giant when 13 years old.

reveals an optic nerve atrophy in the right eye. The chest is well formed and is symmetric; auscultation and percussion fail to show anything abnormal; Erb's dullness is not present; there is a kyphosis in the cervico-dorsal region of the spine. The hands, as the measurements previously given show, are extremely large; they are very thick and broad; the bones and soft parts seem to be equally increased in bulk; the fingers taper slightly; the nails are long and filbert-shaped, not short and broad as is usual in acromegaly; the soft tissues have a peculiar softness and the normal lines are deepened. The feet are enormously large in every way; the toes are proportionate and not deformed in any way; the plantar surface is flat, the normal arch being absent. The patient wears a specially-made shoe of flexible leather, with thin, flexible soles. His physical strength is below normal as tested by the hand dynamometer and by lifting weights. The skin on the right side of the abdomen shows a brown discoloration like that of pityriasis versicolor, which is sharply limited by the median line. The lower part of the abdomen, which protrudes somewhat, is marked by lineæ albicantes; there are no no other scars on the body; the body is devoid of hair except in the genital and axillary regions; over the anterior and posterior surfaces of the thighs are numerous reddish-brown macules about the size of a lentil; the veins of the legs are varicosed; there is no enlargement of the lymphatic glands. The genital organs are under-developed; the testes are almond-sized and are quickly retracted on manipulation; the penis is very small; the hair on the pubis is of the feminine type, being limited by a horizotal line above; sexual desire is not developed. The nervous system is normal; reflexes are present and there are no sensory disturbances. The amount of urine passed in twenty-four hours averages 12,600 c.c., or over eight times the normal amount for an adult; the specific gravity ranges between 1.036 and 1.040; color pale; reaction acid;

Feet of patient with Acromegaly, and the author's.

the fermentation test shows 6.25 per cent. of sugar; no albumin. An estimation of the number of red corpuscles per cubic mm. gives 3,865,200; white corpuscles in normal proportion; hemoglobin present in about 75 per cent. of the normal. On admission to the hospital he had an infected finger, which healed readily after incision and evacuation of pus.

The following will show graphically how the case under description compares favorably with Dr. Maximilian Sternberg's tabular list of symptoms given in *Zeitschrift für Klinische Medicin*, Berlin, 1895:

1.—OBJECTIVE SYMPTOMS.

a. Constant.—Enlarged hands and feet, present; lengthening of face, absent; enlarged eyelids, absent; excessive enlargement of nose, slight; prominence of cheek bones, slight; enlarged lips, slight; enlarged chin, absent; prominent jaw, absent; kyphosis, present; thickening of bones of thorax, (?); abdominal respiration, present.

b. Inconstant.—Prominence of supraorbital arch, present; exophthalmos, absent; optic nerve atrophy, present; hemianopsia, absent; impaired hearing, absent; anosmia, absent; disordered taste, absent; enlarged larynx, absent; depth and roughness of voice, absent; Erb's dullness, absent; atrophy of testicles, present; enlargement of penis, absent; enlargement of abdomen, slight; atrophy of muscles, absent; reflexes, present; enlargement of heart, absent; increased rate of pulse, absent; varicose veins, present; enlarged lymphatic glands, absent; impotence, present; sweats, present; polyuria, present;

glycosuria, present; disordered sensibility, absent; pigmentation, present; warts and moles, absent.

2.—SUBJECTIVE SIGNS.

a. Constant.—Loss of sexual instinct, undeveloped; polyphagia, present; polydipsia, presnt.

b. Inconstant.—Headaches, present; palpitation, absent; dyspnea, absent; paresthesia, absent; vasomotor neuroses, present.

GENERAL AND PSYCHIC SYMPTOMS.

General weakness and ennui, present; melancholia, absent.

Of especial interest in the case is the combination of the two conditions, acromegaly and giantism. The exact relation these bear to each other, or the precise way in which they differ, is a subject yet under discussion; the weight of opinion, however, seems to be in favor of accepting them as distinct entities, giantism being regarded as physiologic and acromegaly as a disease. Virchow claims that there is a sharp distinction between them. Dana speaks of a case of giantism in which one side of the face alone was affected by acromegaly. Langer says that the findings about the heads of so-called giants require two classifications to be made, normal and pathologic. Individuals of unusual size with normal skulls are strong and healthy and usually live to be old, while those with abnormal skulls are weakly and die young. Klebs says that both conditions have the same causes, and are disturbances of the development. Sternberg says, in summing up this subject: "Giantism and acromegaly are two different things. Giantism is an anomaly of development which has no connection in itself with disease. Enlargement of hypophysis, enlarged jaws and the like do not occur in giantism, but in acromegaly, which is a disease with a sharp differentiation. Giantism, however, has with it a disposition to the occurrence of general dystrophy, and in particular acromegaly: This is shown by the fact that about half the cases of giantism are fatal from the development of acromegaly."

I have personally seen nine undoubted cases of acromegaly, all males. All of these have been of more than average body size, but the one under present notice is the only one over 183 cm. (6 feet). In the remaining eight, all of whom were adults, giantism does not come under consideration, but a boy of 16, measuring 196½ cm. and weighing 111.13 kilos, may, I think, be regarded as a giant. He furnishes me a statement of his height and weight at different periods during the last ten years, but as it is given from memory and has not been systematically kept, it is not sufficiently reliable for publication. It is, however, reasonably safe to assume that the development of the acromegaly and the giantism has been contemporaneous. Sternberg says that of the 130 authentic cases of acromegaly described in recent literature, only eighteen have been over 177 cm., of which number he gives a list. Only four have been taller than the subject of this paper, these being the case of Dana, 200 cm.; Haskorec, 200 cm.; Hutchinson, 204.2 cm., and Alibert, 205.7 cm.

It is also worthy of note that in this patient the lower jaw is not enlarged. Sternberg places this enlargement among the constant symptoms. It is the first case in which I have seen it lacking. Of its entire absence there is no room for doubt, as the profile photograph shows. On the other hand, the prominence of the supraorbital ridges, which he places among the inconstant symptoms, has been present in all of the nine cases I have examined.

SOCIETY PROCEEDINGS.

Chicago Academy of Medicine.

Stated Meeting, November 10, 1896.

CASEY A. WOOD, M.D., in the Chair.

(*Continued from page 125.*)

Dr. EMIL RIES read a paper on

NODULAR FORMS OF SALPINGITIS.

The conclusions at which he arrived are as follows:

1. Nodular enlargement of the tube can be caused by a number of different pathologic conditions.

2. Clinical examination does not enable us to make a diagnosis of the pathologic conditions existing in an individual case of nodule of the tube.

3. The diagnosis of the nature of a tubal nodule can only be made with the microscope.

4. The conditions causing nodular enlargement of the tube are congenital or acquired, non-inflammatory or inflammatory.

5. Each of these conditions can exist without the production of nodules.

6. The nodules can be found in all parts of the tube and taking the peculiar anatomy of each part of the tube into account show the same structure.

7. The enlargement can be caused by epithelial or epithelioid formations, connective or muscular tissue or round-cell infiltrations or combinations of two or more of these.

8. The epithelial formations originate in the epithelium of *a*, the tubal mucous membrane (salpingitis pseudo-follicularis, adenomyoma originating in the tubal epithelium); *b*, the accessory tubes (intraparietal parasalpinx and hydroparasalpinx); *c*, remnants of the Wolffian body (adenomyoma).

9. The epithelioid formations originate in the peritoneal epithelium (peritoneal growths under "relative heteropy").

10. The excess of formation of connective tissue is a consequence of inflammatory conditions of the tubal wall (salpingitis interstitialis, Zweifel).

11. The hypertrophy of the muscular tissue is *a*, non-inflammatory (adenomyoma); *b*, consequence of inflammation, Kaetenbach's case.

12. The accumulations of round cells a direct evidence of inflammation: *a*, non-specific (salpingitis interstitialis disseminata, salpingitis abscedens) or, *b*, specific (salpingitis tuberculosa or salpingitis gonorrhoica).

13. The epithelioid formations can occur whenever pseudomembranes cover organs lined with a serous coat.

14. Extrauterine pregnancy (abdominal or tubal) produces epithelioid formations by causing pseudo-membranes to form, not by any irritation peculiar to the pregnancy.

Dr. T. J. WATKINS—I feel extremely fortunate in having had so thorough and scientific examination made of some of the nodular growths which I removed. It was a great surprise to me to learn the character of the growths because I had always considered them inflammatory. I believe the majority of operators consider these nodules inflammatory. Some authorities do not consider these growths adenomata, because the tubes do not contain glands. Dr. Ries believes some of the adenomata develop from the tube and not from the Wolffian body. I would like to be informed how an adenoma can develop from non-glandular tissue.

Some of the practical advantages which arise from a recognition of these nodules as adenomyomata are the possibility of saving the tube and the preservation of the functions of the organ. If these nodules are inflammatory it would be dangerous to leave the tube because points of infection might be left which would cause subsequent trouble; but if these nodules are recognized as non-inflammatory it is possibly safe to leave the tube.

The case referred to by Dr. Ries where I resected was one where a nodule had developed in the tubal wall near the horn of the uterus. About one inch of the tube was resected. The interstitial portion of the tube was excised and the end of the tube was stitched into the excavation which remained. The other tube contained pus and it was removed along with the ovary. The patient menstruated twice after the operation. Two or three months later she wrote me that she thought she was pregnant; that she had skipped two menstrual periods, and that she had symptoms of pregnancy, and wanted to know if there was any danger of allowing pregnancy to continue. I advised her there was not and requested her to report to me regularly. Unfortunately she has not reported and I have not her address.

In another case a nodule had developed in the tubal wall

about two inches from the uterus. I excised the nodule with the intention of reuniting the tube, but could not find the canal of the tube in the incision, and so passed a probe in from the abdominal ostium of the tube, and was very much surprised to find the tube still intact. So it would seem advisable, wherever we find these nodules, to enucleate them and to pass a probe in from the abdominal ostium to see whether we have injured the canal or not. If the nodule occurs near the uterus there is no objection to cutting the tube off and stitching it to the uterus as above mentioned. In cases where the abdominal ostium has become closed from accumulations of serum in the tube and resultant adhesions, it is possible to amputate the distal end of the tube. Quite an efficient abdominal ostium can be made by cutting the serous and muscular layers of the tube which will cause the mucous membrane to become everted.

I have been highly gratified in listening to Dr. Ries' paper, and heartily congratulate the doctor upon his scientific and practical production.

Dr. LUDVIG HEKTOEN—I can add nothing to what Dr. Ries has already brought out. I admit that I am not able to exactly understand the drawing nearest to me, assuming that the condition originates from proliferation of the tubal epithelium. I have been thinking of similar conditions in other parts of the body where proliferations from similar structures occur. The only somewhat similar condition I have thought of is in the bile ducts. In the bile ducts of rabbits, coccidia may produce similar proliferations of the epithelium, resulting in formations not unlike those shown in one of the drawings. It would seem to me that proliferation of the epithelium like we see here might give rise to carcinoma, supposing the study of early tubal carcinoma might throw light upon these apparently benignant proliferations. Concerning the proliferations of the peritoneal endothelium described, I would mention the fact that in chronic leptomeningitis very marked proliferation of the endothelial cells of the lymphatic spaces occur that are not unlike some of the pictures we notice in one of these plates.

Dr. WM. H. RUMPF was called on. He said: I want to congratulate Dr. Ries on his excellent contribution. I know how much work it represents, because I had the privilege of seeing a great deal of it and to see several of the specimens. From seeing them I can perhaps form a better picture than a great many of the Fellows. I agree thoroughly with his conclusions. It is exceedingly difficult to say much about a comparatively new pathologic condition like this, because so little is known about it, and unless one has made investigations of his own concerning it, he can not discuss it or refute any of the facts that have been brought forth. As regards the practical outcome of these investigations, I think we have here a comparatively new field, and that Dr. Watkins' operation is a step in the right direction. I do not know that I could add anything that would be of benefit in the discussion of the subject. Whether the facts set forth by the essayist are established must be shown by future investigations.

Dr. T. J. WATKINS—I would ask Dr. Ries a question. Inasmuch as these nodules are usually associated with inflammatory conditions of the uterus or appendages, is the inflammation by irritation or infection an etiologic factor in the development or growth of adenomyoma of the tubes?

Dr. RIES (closing the discussion)—Many of the points brought out in the discussion I have answered in my paper. I could not discuss them in the short review that I gave of my paper. As regards Dr. Watkins' question regarding the origin of the adenomyoma in the tubal epithelium, I have tried to prove this from observations of direct communication between epithelial masses in the wall and the epithelium of the tube. I have further been able to prove this on a specimen which showed a nodule with a well developed tubal mucous membrane in the center and obliteration of the tubal cavity at both ends of the nodule. There were no epithelial formations in the walls at both ends, but where there was well developed tubal epithelium there were numerous epithelial formations in the wall. This is of interest to us because this origin has been considered impossible, because the tube contains no glands. I tried to refute this by showing that this communication was not a gland, but a diverticulum, properly speaking. It is not a thin process, but a great depression in the mucous membrane. The growing of the tumor I did not discuss in the brief review of my paper. Where the growth originates in epithelial masses belonging to the Wolffian body, it must be assumed that primarily the Wolffian body has not undergone the degree of atrophy which it generally undergoes, and that on account of its abnormally good preservation in extrauterine life these epithelial formations by their presence and activity have caused the irritation of the surrounding tissue which gave rise to the hypertrophic growth and the formation of the tumor. As soon as this hypertrophic growth of muscular tissue begins the epithelial formations participate. That is the theory to which I have arrived as well as von Recklinghausen. With regard to Dr. Hektoen's remarks I believe it is very appropriate to mention a similar occurrence in other organs. I have searched high and low for them, because analogies have to serve instead of experiments. We can not experiment, but we can observe the experiments which nature has made, and in this light I should regard occurrences of such formations in other organs. A somewhat similar formation has been described as occurring in the ureter, the processes of the epithelium of the ureter sometimes entering into the wall of the ureter. There we have to assume that the epithelium in the wall has to be derived from the epithelium of the ureter, because there is no Wolffian body ready to take the responsibility of these growths.

Professor Klebs mentioned the question of the formation of carcinoma from epithelial masses which have become misplaced. Recklinghausen has observed two clear cases of formation of carcinoma in the wall of the uterus without connection with the epithelium of the uterine cavity and attributes these carcinomas to the Wolffian body. He also described a case of adenoma in the wall of the cervix which originated in Gartner's duct. The transportation of epithelial masses into distant localities is a subject which is of very great importance to the gynecologists at present. This transportation becomes important in the formation of a tumor originating in the epithelial investment of the chorionic villi. The first metastases of these tumors are found in the lungs, not in the neighborhood of the uterus or in the glands. The transportation goes along the blood vessels and epithelial cells belonging to the chorionic villi, resembling to all intents and purposes the epithelium of the chorionic villi, have been found in the liver, the lungs, the spleen, where there was not the slightest other sign of carcinoma. But as Professor Klebs has said, epithelium observed in a place where epithelium is not ordinarily found does not necessarily mean carcinoma.

Another point which Professor Klebs advanced was interesting to me because I discussed it in the paper, namely, the origin of the solid masses of "peritoneal growths" in the endothelium and eventually in the lymphatic vessels. I do not accept this theory because I did not find these masses arranged in the way in which endothelial growths are arranged; that is to say, I did not find the shape of rosary as we find it in carcinomatous infiltrations of lymphatic capillaries. It is not one bead arranged next to the other—dilatations and constrictions. There are no bifurcations and I can follow them to the surface to the endothelial covering of the tube. Of course the endothelial covering of the tube is practically the lining of a large lymph sac. The peritoneum is a large lymph sac and if you wish you can call these growths endothelial. But these endothelial growths show an undoubted similarity to the germinative epithelium which, looked at from an embryonic standpoint, is comparatively easy to explain. The germinative epithelium and the endothelium covering the rest of the peritoneum are originally one and the same. The germinative epithelium has preserved the size and activity of the embryonic stage. We find in other tumors that cells reassume activity and functions which they possess only in embryonic life. We always speak of the reassumption of embryonic activity when we speak of the formation of carcinomas and of other tumors. Why not in this case?

A case of pachydermia of the larynx, as described by Professor Klebs, is very much like the cases of abnormal growth of epithelium of the chorionic villi in the uterus after myxomatous degeneration of the chorionic villi or retention of nondegenerated villi. I have some specimens where not the slightest sign of carcinoma existed in the uterus, yet I find distinct growths of epithelium belonging to the chorionic villi. The cases were those of endometritis post abortum and were curetted on account of the hemorrhages. I examined them microscopically and found eventually chorionic villi and decidual masses. Sometimes the epithelium of the chorionic villi embedded in the decidual masses is not atrophied or degenerated, but has started to grow. That may be the first stage of deciduoma, but it is not necessarily that.

The malformation of the tubes in this case would not only be a double formation, but a fourfold or sixfold formation. This is theoretic. Double accessory tubes are comparatively frequent. If you pay attention to these conditions after operations you will find them much more frequently than you expect, especially if you resort to the precaution of observing your specimens when floating in water. Very frequently you do not see the accessory tubes if you do not use this precaution, because they are so small that they escape observation.

With regard to the frequency of the nodules, you will find them more frequently after your attention has been directed to them. Before I examined them microscopically I did not find them frequently. I believe that in my four years' work at the Strassburg University Woman's Hospital I did not see more than two or three cases, but since I have paid special attention to these nodules I have found them in a large number of cases. The nodules I described are not sacculated or occluded parts of the tube, occluded by inflammatory masses or inflammatory constrictions, but are real thickenings of the wall. Inflammatory sacculated nodules occur in the tube, but that is not what I designated as a nodule. It is a different condition.

SELECTIONS.

Experience with Behring's "Heilserum."—Dr. Haase of Strasburg, in *Aerztliche Rundschau*, October, reports his experience with the curative serum of diphtheria in an unborken series of 291 cases. He had ten deaths, all advanced cases when first seen by him, or less than 4 per cent. "The inoculations included one of 3,000 units of immunization pro dosi, and another successful case was that of a child only two days old, into which I injected 1,000 units of immunization. In the latter case it is possible that either I or the nurse communicated the disease, but in spite of a very high fever and violent symptoms of stenosis at first, within twenty-four hours the well-known shriveling of the diphtheritic membrane on the ulterior pharyngeal wall and the tonsils commenced. The child was completely cured within six days. The injection was unaccompanied by any bye-effects. The child exhibits constant increase in weight, and is in good health. For the information of opponents to the serum therapy I would mention that in all doubtful cases diphtheritic investigation was undertaken, and on each occasion the presence of true diphtheria bacteria was demonstrated. The extremely favorable results which I have obtained undoubtedly do not depend entirely upon the use of serum, but concomitant circumstances have contributed thereto. For instance, a large majority of the cases were tonsillar diphtheria, and in consequence of the instructions given to the sisters and nurses it was nearly always possible to carry out injections in the first stages of the diphtheritic attack."

The Study of Medicine a Perennial Delight.—One of the pithiest of recent addresses is that of Dr. D. W. Cheever, given in the *Boston Medical and Surgical Journal*, December 24. He treats of the study of medicine, as contradistinguished from its practice, in a luminous way; also, one or two other points which we will quote below, with our thanks to the writer, and the thanks of our readers in advance.

"The *study of medicine is one delight* from beginning to end. You begin with anatomy, and what is more delightful than the study of that subject for a year or two, in which you can see almost every mechanical law and mechanical device demonstrated; then you pass on from that to physiology, and see all the most delicate functions; and when you go on still further and notice them in sickness, and can reason on the causes and conditions of disease far better than you could before, and then apply remedies that will regulate and give relief; what study is more delightful? The horizon of knowledge ever recedes. You are just as much a student when you are 80 years old as when you are 20. Surgery lately has advanced so far and so fast that it has distanced medicine, and is now, since the application of antiseptics, the most attractive thing; and this, of course, is limitless; but meanwhile, even now at this moment and henceforward, I am sure that medicine is going to resume its own place, and by and by maintain its supremacy, which it always should have over surgery. I have always said that the physician is superior to the surgeon; that he has a broader field to look over; that his knowledge must be more extensive to make him a good physician than a good surgeon. Now the physician is coming back; and he is coming back through the great advances being made so rapidly through the discovery of the antitoxins and of bacteriology. In ten years, I will venture to say, that medicine will be on as high a plane as it ever was. The resources of our profession are endless in delight; and if you find in the beginning that you love it, you will never cease to be happy in its pursuit.

"No suit of malpractice should be condoned or settled in any way, but should be fought out. As a rule, however long it is fought, the doctor will win his case. It is rare in Massachusetts that the jury will go against the doctor, in the long run, unless he proves to be a man of disreputable character. As a rule, the law is lenient, the law is just; and the interpretation put on it by most of our judges is rather on the side of the physician. It reads somewhat in this way: 'The doctor is not obliged to be possessed of extraordinary skill; if it can be shown that he has ordinary skill, that he did his best to use the skill which he had, that the skill that he used on his patient was what is averaged by the medical profession in his vicinity; if it can be proved that he did not neglect his patient, that he did the best he could, he can not be cast in damages in a suit for malpractice." I have looked over the records very carefully, and the judges are uniformly fair, in their charges to the doctor. We are all liable to be sued on the slightest provocation, and we must defend it. We are not the only ones who suffer; if you look at the records for actions of tort, as they are called, you will see that the courts are loaded down with them. Corporations, municipalities, individuals, merchants, business men, contractors and employers, are constantly blackmailed in the most shameful way; many of these cases they settle without allowing them to go into court. So that our profession is not alone or peculiar in this respect; only it seems to us very hard, when we have done the best we could, that we should be for a long while kept in a state of uncertainty and forced to pay in the end, although we get a verdict triumphantly in our favor. Now here comes in sometimes the importance of consultation, because if the patient has been seen in the beginning by other doctors; if they all agree; if they are sure what was the matter with him, and that what ought to have been done for him was done, this would have great weight, and will possibly prevent a suit from being brought. That I have known to be so in some cases. But you can not allow these suits to go without attending to them, because if a person yields to blackmail, all the hungry throng of sharks will mark him out as a prey, and he will have suit after suit brought against him, and soon will be entirely ruined. Moreover, on account of his self-respect he must stand for his rights. I do not think that any suit for malpractice will hurt a young doctor; in fact, sometimes it is an advertisement. It is not altogether an unmitigated hardship.

"The doctor is a victim of the interviewer and reporter; they not only pursue the doctor, but haunt the house of the sick, and even the chamber of death. There is no privacy, no respect for the patient's feelings. If any person, in a public position, happens to be sick or dying, the papers want it all, and without regard to the feelings of the friends. Now, what course must the doctor take when pursued in this way? Reporters come from his own town, or from distant cities, and claim that the illness of this person, and whether he is to live or die, is of great importance to the public. Why? Because it may affect some political deal; because it may affect the stock market; certain changes may take place if he is about to die; and so on. To whom is this man's reputation and life so important as to his own family? How can the doctor presume to give away that knowledge which belongs to the family? It seems to me the only answer for a physician to make, is to say: 'If you will bring me a note from the nearest relatives requesting me to give you such knowledge as I can of this patient, you shall

have it; otherwise I shall say nothing; and you may place whatever interpretation you please on mysilence.'"

And in conclusion:

"Ours is the noblest profession that exists; it is, above all, the most humane; it can not be otherwise; we seek daily, and give our lives, to make people happier, to make them better, to alleviate their sufferings in every possible way. This reacts upon us; we share their joy; and we frequently also get more credit than we deserve for unexpected results; and although sometimes we have a great many anxieties in the event of unexpected deaths, yet these are evenly balanced by seeing others convalesce. In England a Medical Defence Union is in vigorous existence. It assumes the risks of suits for malpractice and defends them. It is a mutual insurance company of medical men. Here, an attempt was made in 1895 to secure the assent of the Massachusetts Legislature to the establishment of a Medical and Surgical Branch of the Employers' Liability Insurance Company. It failed, however. It is the opinion of some lawyers that the existence of such an association to defend the doctor would turn the jury against him. Exorbitant fees injure the standing of the profession. Liberal fees, in consultation, are a protection to the attending physician. Small fees to the poor—but some fee—are the true course for the young doctor. McClelland on Civil Malpractice (p. 15) says: 'Among practitioners of the different schools consultations can not be held, for the reason that there is a radical difference between them either as to the medicines to be used, or the manner of using them; hence, if the practitioners be honest in their several beliefs, no good can accrue to the patient, this being the sole object.' Now, when does a doctor want a consultation to protect himself? In doubtful injuries; with ill-minded people, contentious people, people who are likely to make trouble, people who are never satisfied with anything that is done for them. The doctor soon estimates that class of people; he sees a great many of them; he can select them and differentiate them in about five minutes after he is called—and that is the class against which he is very wary. The doctor is not obliged to go when called; the only law which binds him is the obligation of humanity. Thus, if in an isolated community and no other physician were to be found, he might feel obliged, while he would not in a city or town where there were other doctors. Fatigue, sickness, overwork, other engagements, are sufficient excuses. Were it otherwise, he would soon die of exhaustion. He may decline, day or night; he can select his patients as he chooses; but if he goes, he feels obliged to continue."

PRACTICAL NOTES.

Antifebrile and Analgesic Effect of Citrophen.—E. Homberger announces that the results of his experience with citrophen in tuberculosis have been that in doses of 0.5 gram, citrophen rapidly reduces the temperature in febrile tuberculosis, without producing any secondary inconveniences. The same dose repeated four times in twenty-four hours in cases of acute rheumatism and neuralgia has given good results. In a large number of cases the citrophen increased the appetite, and as the odor recalls that of citric acid, patients enjoy taking it.—*Nouveaux Remèdes*, December 8.

Thymic Asthma.—The diagnosis of this disease is usually made after the death of the patient. In the case of a child described recently, who suffered from intense dyspnea, tracheotomy was performed without result and it was decided that the cause must be some compression by a tumor or hypertrophied thymus gland. Extending the incision, the thymus gland was found extremely enlarged and was removed. At once the respiration became normal and the child was completely cured. Siegel, who reports the case, suggests that it would be more appropriate to designate this trouble as thymic stenosis of the trachea or bronchi.—*Province Méd.*, December 12.

Operative Treatment of Stones in the Ductus Choledochus.—W. Braun reviews the 124 cases on record in his Göttingen thesis, finding that the proportion of women to men affected is as 4 to 1. Thirty-five patients died, a mortality of 28 per cent. In about 10 per cent. it was found that the operation had not been radical and that stones still remained after it. In four cases patients with extravasation of bile recovered, while in four other cases it was the cause of death. In eighteen of fifty-nine cases the suture held, and in nineteen it gave way. Thirty-nine cases have been seen recently and no relapses have occurred among them, showing that they are rare.—*Cbl. f. Chir.*, December 19.

Comparative Nutritive Value of Nutrose and Peptone.—Bornstein has been investigating the comparative values of these substances and finds that nutrose (Rhörmann and Liebrecht), is superior to peptone (Liebig) in every respect. It is agreeable to the taste while peptone is not; it is almost completely absorbed without producing any irritation in the alimentary canal, while the irritation caused by the continued use of peptone is so severe that it is impossible to take a large amount for any length of time. Nutrose also is completely utilized, even more than meat; peptone on the contrary is assimilated less perfectly than meat. The price of the nutrose is no higher than that of peptone.—*Nouveaux Remèdes*, December 8.

Dermatol as an Antidiarrheic.—N. Klimeneko announces as the conclusions from his observations in sixty cases of diarrhea which he has treated with dermatol that it deserves more attention than it has hitherto received as a remedy of great efficacy in diarrhea. Many cases yielded to it that had resisted all other treatment. It was equally effective whatever the cause of the diarrhea, and as it has no taste or odor, it is readily taken by the patients. No inconvenience of any kind followed its use, and some claimed that their colics were also cured by it. He administered it in powders of 0.25 to 1 gram at a time, from 2 to 8 grams in all during the twenty-four hours. When there was a severe cough beside he administered simultaneously morphin, opium or codein, but in other cases he gave the dermatol alone. The diarrhea was caused by existing tuberculosis in sixteen cases, by typhoid fever in six, including one case with fever and peritonitis from perforation; grippe in four, nephritis in four, chronic intestinal catarrh in twenty-seven and three infants.—*Nouv. Remèdes*, December 8.

Iodoform Solutions for Subcutaneous Injections.—Dinkler states that the solution of iodoform in almond oil (5 per cent.) is readily decomposed by the light and produces irritation owing to the crystallization of the iodoform under the skin. It is rapidly absorbed and easily gives rise to toxic phenomena. It is advisable to reduce by one-half the usual dose of 1-10 gram. Iodoform triturated with paraffin (5 per cent.) decomposes easily and only the fresh preparation should be used. No toxic phenomena were observed from its use. Iodoform triturated with glycerin (5 per cent.) is quite soluble. Absorption is slow; the iodoform is not distributed evenly under the skin and the injections are painful. Iodoform triturated with wheat starch finely pulverized (5 per cent.) is to be recommended. Protected from the light in air tight bottles, it keeps for five to eight days without alteration of any kind, the iodoform suspended throughout the mass. Injections of this do not produce irritation; absorption takes place slowly and uniformly and is complete in three days.—*Nouveaux Remèdes*, December 8.

Hemol.—Kobert's hemol is produced by mixing thoroughly pulverized zinc with blood and then removing the zinc just before it dries. It forms a brownish powder, with a slightly brackish odor. It is prescribed for chlorosis as a powder, with or without chocolate, 0.3 to 0.5 of a gram of each; in pills made with depurated licorice juice in compressed tablets of 0.25 gram; and in chocolate pastilles of 0.5 gram. It contains 0.2 per cent. of iron and dissolves gradually in the intestines, where it is slowly absorbed. J. Bartlett reports in the *Therap. Montsh.* of October thirty chlorotic patients treated with hemol (in powders of 0.25 to 0.6 gram, twice a day) with excellent results. Even when continued a long time it produced no secondary annoyance; the teeth were not blackened,

there was no constipation and the appetite remained the same or was improved. It is practically a blood extract, and contains so little iron that it is supported by the weakest stomachs. He recommends the combination of arsenic with the hemol whenever arsenic is indicated, 1 to 100. This combination seems to be free from the inconveniences that frequently attend the administration of arsenic alone.—*Nouv. Remèdes*, December 8.

On Removal of Foreign Bodies from the Esophagus.—Since the article on this subject was published October 17, in the JOURNAL, the cathode ray has been improved to such an extent that the location of coins, etc., in the esophagus, has become an easy matter, and then by opening down to the esophagus, the foreign body can be palpated and manipulated upward (without making an incision into the esophagus), until it can be reached through the mouth and withdrawn with a pair of Mathieu forceps with corrugated blades. Foreign bodies as large as 15 millimeters are easily swallowed by children; they are usually arrested at the narrowest portion of the esophagus, and if they stand upright it is difficult to recognize their presence by the usual methods, if the children continue to drink and swallow and do not complain of pain. In these cases radiography is of the greatest advantage, as it shows the exact location of the object. An incision down to the esophagus then will allow the object to be forced upward and extracted through the mouth, avoiding an incision into the organ and thus not interfering with alimentation afterward.—*Bulletin de l'Acad. de Méd.* December 8.

Lymphadenoma with Marked Pigmentation.—At the Medical Society of London, Dr. de Havilland Hall showed a case of lymphadenoma in a patient aged 21 years, who in January, 1894, complained of indisposition for exertion for eight or nine months and a "dreadful cough." There had been no expectoration, no hemoptysis and no night sweats, but he had lost nearly a stone in weight. Impaired resonance at the left apex anteriorly and posteriorly with respiration of a cogged-wheel type, was the only abnormal state found. In March, 1895, great grandular enlargement in the cervical and supraclavicular regions of the right side was noted and there was a similar enlargement on the left side, but less marked, and an enlarged gland in the axilla. The left chest was dull to the third rib, and the breath sounds were absent over the dull area. In June, 1895, there was a diminution in the size of the glands and the patient had gained slightly in weight. In May, 1896, the patient had lost eight pounds in weight; there was a dullness at the base of the left chest with deficient entry of air; the glands were about the same size as before; there was a mass of enlarged glands over the upper part of the sternum and the spleen was palpable. The skin was much pigmented. On Nov. 7, 1896, there was dullness all over the left lung, with almost entire absence of respiratory murmur, and there was a great increase in the size of the glands. Dr. Hall commented on the difficulty of diagnosis in the first instance, on the slow progress of the disease while the patient was taking arsenic and on the marked pigmentation; and he raised the question whether the pigmentation was due to the arsenic or to the involvement of the solar plexus and adrenals in a mass of enlarged abdominal glands.—*The Scalpel*, December.

Pneumectomy.—F. Terrier in the *Progrès Méd.* of December 12, reviews the record of this operation to date, which has been performed on man for tuberculosis, cancer and pulmonary hernia. In tuberculosis the three successful operations reported were circumscribed lesions in otherwise sound lungs and bodies, and it is more than probable that they might have been cured without surgical intervention. Block's patient died under his hands and he committed suicide to escape criminal prosecution. Surgical intervention in neoplasms when due to cancerous infection elsewhere, has been unsuccessful, owing to the presence of several foci which it was impossible to find and exterminate entirely. In two cases when a cancer in the thoracic wall had spread into the pleural cavity, Krönlein and W. Müller operated with success, although one patient relapsed four years later, when a second operation was required which was similarly successful. In these cases the surgeon must not hesitate to resect the number of ribs necessary to open up the intra-thoracic extension of the neoplasm. In cases of hernia from stabs, etc., when the lung simply protrudes to close mechanically the incision, all that is needed is to disinfect the wound as thoroughly as possible and suture the serosa. The reduction must be made as early as possible and the opening closed if the tissues are not already degenerated. If they are, resection of the gangrenous portion and reduction of the pedicle is the only procedure. It has secured two satisfactory recoveries. In case of actual hernia, Tuffier incises the tumor, reduces the herniated lung with resection of the sac and débridement of the orifice, detaching the wound all around, and suturing the ring. Experiments on animals have shown that the partial and even total resection of a lung is possible and even easy in many animals, but Milton of Georgia, he states, was the first to perform pneumectomy on man. The surgical operation on the lungs most frequently required is for traumatic hernia with pulmonary parenchymatous complications.

Application of the Schleich Method of Infiltration Anesthesia.—The results of 118 operations performed in the Breslau clinic are described in the *Cbl. f. Chir.* of December 12. It was found perfectly harmless; transient inconveniences were only observed in two cases, probably due to some individual intolerance of cocain. In the first two cases treated with it, it was not successful, owing to lack of familiarity with the technique, but after that in thirteen cases it produced partially satisfactory results and in all the rest it was absolutely successful. It is delightful, the author states, to witness how insignificant an operation becomes with it—even what are called the great operations. Miculicz removed fifty-two tumors with it, from the size of an egg to that of a child's head. The operation of sectioning the vas deferens was performed eight times; ligating the vena saphena, exploratory laparotomy and for strangulated hernia, each twice; thoracotomy for empyema of the pleura once, and gastrostomy ten times. The method is especially advantageous in these last operations, as the patients are always in an enfeebled condition and general narcosis is hazardous. With this they can arise from the operating table and go about without inconveniences. Infiltration is especially valuable in incarcerated hernia, as it is only necessary to anesthetize the outer surface of the abdomen. There is no pain from cutting into the peritoneum and intestine and no anesthetic is required for them. Miculicz intends to use it in still more important operations, gastroenterostomy, resection of the pylorus, etc. He combines it with Esmarch's method of driving the blood out of the part (described in the JOURNAL, Vol. xxvii, page 89), but he finds it necessary to anesthetize first and expel the blood afterward. Otherwise the injection into the distended part is painful and the blood can not be driven out so easily as before. The actual time required for an operation is lengthened five to ten minutes, although Miculicz has recently been modifying Schleich's method somewhat, proceeding on the assumption that there is less danger of infecting the deeper layers when the anesthesia is produced by one instead of a number of injections. In other respects he follows Schleich's instructions to the letter. The *D. M. Woch.*, of December 10, also reports equally favorable results with this method in eighty-eight operations performed by Steinthal, especially in abdominal operations, chiefly as the danger of vomiting is avoided. The necessity of overcoming the psychic shock by encouraging words and demeanor is insisted upon, as also the extra care required if general narcosis is resorted to later in the course of the operation. The instructions in the Schleich book are all that is necessary to perform the anesthesia successfully. The solution No. II was used most frequently. (Cocain mur. 0.1; morph. mur. 0.0025; dissolved in 100 water.)

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INFORMATION WANTED.

It would greatly facilitate the prompt delivery of the JOURNAL to those members of the ASSOCIATION living in large cities, if they would kindly furnish this office with their street address in those cases where it is omitted from the wrapper of their JOURNAL, as we have been notified by the postmasters of the larger cities that second-class mail matter not having street address, would be placed in the general delivery to await call.

SATURDAY, JANUARY 23, 1897.

THE ANTIVIVISECTION BILL.

So many resolutions have been formulated and adopted by medical men as members of local, State and National associations, and so much has been printed in the lay as well as in the medical press, concerning the "Antivivisection Bill," now before the United States Senate, that it seems almost needless to refer in these columns to the arguments against it.

The bill, S. 1552, entitled "A bill for the further prevention of cruelty to animals in the District of Columbia," was favorably reported to the Senate by Mr. GALLINGER, May 26, 1896, from the Committee on the District, although the AMERICAN MEDICAL ASSOCIATION had entered an earnest protest against its passage "unless it shall first be shown by an impartial investigation that cruel and unnecessary experiments are being performed in the District of Columbia and that existing laws do not provide suitable punishment for cruelty to the domestic animals." From this it might be inferred that the investigation made by the Senate Committee had demonstrated the inadequacy of existing laws to cope with abuses. The medical profession of the District, together with the men in high Governmental positions more or less related to medicine, and the representatives of the educational institutions, took exception to the report of the Senate Committee and appointed a joint committee to present to the Senate and House of Representatives their views on the subject. On this committee the best men in their line of work were appointed including among others, Dr. S. C. BUSEY, representing the Medical Society of the District; Surgeon General GEO. M. STERNBERG, U. S. Army, representing the Biological Society: Dr. D. E. SALMON, Chief of the Bureau of Animal Industry, representing the Agricultural Department, and Surgeon WALTER REED, representing the Medical Department of the Army. This Committee has presented a memorial to Congress protesting against the proposed legislation, and suggesting that the favorable report presented by Mr. GALLINGER was based on a misunderstanding of the facts relative to experimentation on animals, and without due consideration of the benefits to mankind and to animals which are derived from such experimentation.

The memorial claims that the scope or purpose of the bill is much more comprehensive, radical and destructive to scientific research than is admitted by its advocates. It states that the reasons of the joint committee for protesting against the proposed legislation, are briefly summarized in the resolutions adopted unanimously by the AMERICAN MEDICAL ASSOCIATION at its meeting in May 1896, and these resolutions are cited in full. As apposed to the statement in the Senate Committee's report that there is a sharp difference of opinion among medical men as to the value of vivisection, it invites attention to the resolutions adopted by sixty-eight National, State and prominent local medical and scientific associations, and cites the memorial of the Association of American Physicians and Surgeons as follows:

The voice of science and of medicine, so far as it receives authoritative utterance, is overwhelmingly opposed to legislation of any kind which would take in any measure the direction of experimental medicine and physiology out of the hands of those who, on account of their special fitness, have been chosen by the authorities of our higher institutions of learning and of research, to convey instruction and to conduct investigations in these departments.

The report of the Senate Committee advocating the bill, states that multitudes of educated, humane physicians have learned by patient research and large experience the value of other methods to secure the results that have been obtained by biologic experimentation. The memorialists of the District of Columbia profess themselves ignorant of these other methods; and we confess that withstanding our editorial acumen, we can not enlighten them. It is suggested that the other methods must involve experiments on the human subject, and that if there is a question of preventing cruelty to animals it might be well to inquire which animal had better be selected as the object of Congressional legislation, the man, the woman, the beloved child, or the dog, the cat, the rat, or the guinea pig, etc.

The advocates of the bill also deny that any real advance has been made in medical knowledge in the laboratory of the biologist. The reply to this is a

reference to the knowledge possessed by every educated physician of the great discoveries made by biologic methods during the past twenty-five years. A summary of these is presented, beginning with the identification of the bacillus of anthrax by DAVAINE in 1850, and PASTEUR's subsequent discovery of the method of protecting animals by inoculations with attenuated virus. Advances in our knowledge are cited in relation to relapsing fever, typhoid fever, trichinosis, pneumonia, consumption, glanders, cholera, tetanus, diphtheria and the bubonic plague. The protection to human life by immunizing against infectious diseases is also stated, and citation is made of the many benefits to domestic animals that have been derived from biologic experiments conducted in the District of Columbia by the Bureau of Animal Industry.

We might say a great deal more on this subject, but editorial space is limited. In concluding, however, we must not forget to suggest that now is the time for action against this bill, which would so handicap the progress of scientific research as now conducted for the benefit of mankind. When this was written, Mr. GALLINGER was in New Hampshire looking to his reëlection; but on his return to Washington, Senate Bill 1552, with its favorable report from the committee, will no doubt be promptly called up for passage. We would suggest that members of the AMERICAN MEDICAL ASSOCIATION who have influence with Senators or members of the House of Representatives, communicate their views on this subject to their friends in the National Legislature, that the advance of medical science may not be unnecessarily impeded.

Incidentally we venture to suggest that some of our New Hampshire brethren should have looked after Dr. GALLINGER.

RUSH—HAHNEMANN—PASTEUR.

The proposition which was made at the meeting of the AMERICAN MEDICAL ASSOCIATION in the city of Washington in the year 1884, that a monument should be erected by the physicians of America in the capital of the United States to some great medical hero of the Revolution, as typifying the part that the profession of medicine had taken in the establishment of the Republic, was enthusiastically received and unanimously indorsed from the venerable President, AUSTIN FLINT, Sr., to the youngest member of the body. It was admitted by every one that in a city where there were memorials of the eminent men of other callings, who had risked their lives in the struggle for National independence, it was but fit that the profession of medicine should have its representative among these heroic figures, and all agreed that there was one man justly entitled to the distinction of having his effigy handed down to posterity as that of a physician who had discharged all the duties of his vocation while fulfilling all the obligations of a citizen in the most trying period of his country's existence. There are other names of medical men affixed to the Declaration of Independence, but Dr. BENJAMIN RUSH stands alone as an eminent physician in active practice, who without sacrificing his duties to his patients, took a conspicuous part in the political events of the day. It is superfluous to repeat here the long record of his meritorious works. Two years after his death it was stated by a historian of the times (in 1815): "Considered in relation to the entire composition of his character, as a practitioner, a teacher, a philosopher and a writer, Dr. RUSH must be acknowledged to have been the *most distinguished physician that America has produced.* In no quarter of the globe has it fallen to the lot of many individuals to occupy so extensive a sphere and to comply with duties so numerous and diversified"—and another declared that his conduct was such that all humanity should erect a statue to him.

Nevertheless the project, for reasons difficult to understand, has made slow progress. At every annual meeting it has been enthusiastically reindorsed and resolutions have been adopted, year after year, urging its speedy completion. Meantime, the little body of homeopaths have set out to erect a monument at Washington to their founder, and albeit a foreigner, in no way associated with the history of the country, they have succeeded in raising a very large fund for this purpose, and the model which has been adopted, after competition by the ablest sculptors, is evidence that it will be the most elaborate artistic work of the kind in this country. Perhaps a rivalry of this sort was to have been expected, since under no possibility can there be concert between the two parties.

But the present year has witnessed still another monumental enterprise for the erection of a statue of PASTEUR in the city of Paris, France. The State Board of Health of Pennsylvania has transmitted to the public press a series of resolutions, that "WHEREAS, this board has been applied to by the Supervising Surgeon-General of the United States Marine Hospital Service to secure its coöperation in aid of the international subscription for the erection at Paris of a monument to M. PASTEUR, *therefore*[1] *Resolved:* That the chairman of the executive committee be authorized to receive contributions for this purpose, and transmit them to the treasurer of the PASTEUR Monument Committee at Washington."

If ever charity should begin at home it should do so in this instance. After American physicians shall have honored at home the remarkable man, who did so much to elevate medicine by teaching and example, it may be well for them to aid in building monuments in foreign countries. If a single medical man, who has but a few dollars to contribute to one such project, is induced to give it for a monument in Paris, rather

[1] Italic is ours.

than for that to his own illustrious countryman in his own capital, just to that extent will injustice have been done to the commendable project initiated at Washington in 1884.

It is significant of the lapse of time that of the nine men first associated with the RUSH monument proposition, six, Dr. AUSTIN FLINT of New York, Dr. JOSEPH M. TONER of Washington, Dr. HENRY H. SMITH of Philadelphia, Dr. ROBERT A. KINLOCK of Charleston, South Carolina, Dr. JOHN H. MURPHY of St. Paul, Minnesota, and Dr. MORRIS H. HENRY of New York City, have died, only three surviving, Dr. GIHON, the chairman, Dr. ROHÉ, the secretary, and Dr. S. C. GORDON of Portland, Maine.

If it were true in 1884 that BENJAMIN RUSH was "the greatest physician this country has ever produced," it is still true today, and the obligation to honor his memory is greater by the twelve years that have elapsed. Hence, the members of the profession in America are urged by every consideration of duty and justice, pride and patriotism, to give whatever they may be able to contribute to this monument at Washington, which shall commemorate not so much the individual, BENJAMIN RUSH, as the ideal patriot physician of the Revolution.

PROPOSED HEALTH DEPARTMENT FOR THE GREATER NEW YORK.

It is proposed in the new charter for New York City and vicinity to perpetuate the montrosity that at present exists under the name of a Board of Health. New York is about the only large city except Chicago in the civilized world that is so handicapped that a medical sanitarian can not rise to the head of its administration; a plumber, a ward "healer" or stock-broker can become the head of the Board, but all physicians however competent are excluded. To say that this results in a montrosity is to use a mild term, at least so it will seem to any medical audience. The chapter devoted to health preservation has eight principal subjects, namely; 1, the powers and duties of the department, its officers and administration; 2, marriages, births, deaths; 3, duties of physicians and others; 4, legal proceedings and punishment for disobedience of orders and ordinances; 5, reimbursement of expenses; 6, abatement by suit; 7, tenement and lodging houses; 8, pension fund.

Under the first head it is announced that there shall be a health department, of which the board of health shall be the head. The board will consist of the president of the board of police, the health officer of the port and two officers, to be called commissioners of health, one of whom shall have been a practicing physician for not less than ten years preceding his appointment. The president of the board is not to be a physician. The commissioners are to hold office for four years.

The authority of the board of health under the new charter will stretch to the quarantine limits. The board will make an annual report of its operations to the mayor of the greater city. It may grant bills of health to masters of vessels and may order and enforce repairs to buildings where the public health demands it. Under the head of extraordinary expenditure the board is authorised to use a sum not exceeding $80,000 in excess of the annual expenditure if any emergency should arise demanding it.

Two bureaus are provided for, the sanitary superintendent to be chief of one and the registrar of records of the other. Branch offices are to be established in all the boroughs with assistant sanitary superintendents and assistants registrars. Chief clerks are to be appointed in each borough with powers similar to those of the secretary of the board. There are to be fifty inspectors and possibly fifty-eight. The present sanitory inspectors are to be continued in office. A sanitary squad of police consisting of fifty men, who have been on the force for five years, is to be formed. Every officer must pass a civil service examination in the sanitary laws and ordinances.

Certain offensive trades are to be supervised by the department and such apparently trifling details as yards and cellars will also come under its notice. The board is given unlimited authority to take discretionary measures for the prevention of disease and it is stipulated in the charter that any person violating the rules in this direction may be fined a sum not exceeding $150 or to be imprisoned for a period not exceeding six months or both. Any violation of the sanitary code is to be treated and punished as a misdemeanor.

The board is empowered to continue or organize a corps of vaccinators and of physicians in order to effectually prevent the spread of smallpox by the thorough and systematic vaccination of all unvaccinated persons and for the relief of persons residing in greater New York suffering with diphtheria and other infectious diseases.

The reporting of births, deaths and marriages promptly and systematically is provided for in the charter, and the duties of physicians and others working under the board are carefully pointed out.

A pension fund is established under the department. All money paid for searches and transcripts of records and all fines and penalties for violation of the sanitary code as well as those inflicted on officials of the department will go to make up this fund. Pensions are provided for physicians and other employes permanently disabled in the discharge of their duty at a rate not to exceed half the salary of the pensioner. A $300 pension for widows of such employes is also provided and another for twenty years service.

AN UNFORTUNATE CREATURE MALTREATED.

During the past week the newspapers of the whole world have made the most of the sensational escapades of an evidently mentally unbalanced woman of Amer-

ican birth, married to a titled foreigner. The public, that is that part of it that enjoys social scandals and to which the scandal-mongers cater in their publication, does not probably read between the lines of the misled woman's interviews the evident symptoms of want of mental balance that are so clearly suggested to any one accustomed to the vagaries of those who are on or over the borderland of insanity. The scandal in itself is not such an unusual one so far as the immoral element is concerned in the class to which this particular delinquent has allied herself—according to a popular English novelist recently deceased, irregularities of a certain sort are the special privilege of the aristocracy—but in this particular case the fact that she is an American, that she has allowed herself to be generally interviewed and has otherwise exhibited a special desire for notoriety and has given utterance to wild and incoherent statements as regards her social and moral ideas and intentions, and the further fact as it appears, that very prominent personages are in fear of her revelations, have created more than a usual interest in the case. If her insanity is not generally suspected abroad it is perhaps due to extravagant notions held there as to the possibilities of American customs and manners; but to an impartial observer in this country with a knowledge of the published facts in the family history the evidences are sufficient to more than merely suggest mental aberration as a charitable supposition in the case. In this point of view it has a medical interest and the outcome will be worth noting in case the unfortunate woman continues to court publicity as at present.

THE EMPLOYMENT OF X RAYS FOR THE RELIEF OF SOME FORMS OF BLINDNESS.

It is not unreasonable to hope that many new uses will be found for the X rays, both in the arts and in the sciences. The possibilities of the range of application to which the recently discovered force is susceptible are yet beyond intelligent conception. Whether we have to do with a new force or with merely some modification of an already familiar force remains to be determined. In any event we have had placed in our hands by ROENTGEN'S discovery an agency capable of doing what has heretofore been considered impossible.

There has been exploited of late rather noisily in the newspapers the idea that the blind might be made to see by means of the X rays. It was not expected by intelligent minds that vision of any kind could be restored when atrophy or degeneration or other form of destruction of optic nerves, centers or tracts had taken place. An Austrian physician, EMIL BOCK (*Wiener medizinische Wochenschrift*, Dec. 19, 1896, p. 2269), however, has recently made an ingenious suggestion in this connection, which on its surface appears plausible and capable of practical application. In a word, the proposition is made that it may be possible by means of the X rays to imprint visual images upon the retinæ of persons possessing a healthy nervous optic apparatus, with preservation of the light-sense, in whom vision has been destroyed through irremediable opacities of the refractive media.

Experiments have already shown the idea to be theoretically correct and practically feasible. All that is necessary is to make an impression with some material impervious to the X rays upon substances through which the rays will pass. It is not to be hoped that any degree of permanent vision will thus be restored, but it is possible that the procedure may prove serviceable in the instruction of blind persons who have previously had the use of their eyes, in the recognition of legal documents, in the identification of individuals, etc.

ABOLITION OF REFLEX VOMITING AS A SYMPTOM OF HYSTERIA.

Cutaneous anesthesia has long been recognized as one of the stigmata of hysteria, and associated loss of sensibility has often been observed on the mucous surfaces. Anesthesia of the pharynx especially has been looked upon as a characteristic phenomenon and to this has been attributed the absence of reflex vomiting so commonly noted in hysteric subjects. In turn, when this reflex act is found to be wanting, the fact is usually accepted as evidence that the pharynx is anesthetic. With the object of determining whether this peculiarity is due really to sensory impairment, to motor impairment or to disturbance in the reflex arc, KATTWINKEL (*Deutsches Archiv für klinische Medicin*, B. lvii, H. 5, 6, p. 549) undertook the examination of 104 cases of hysteria at the medical clinic of the University of Munich, and found absence of the reflex act of vomiting following irritation of the pharynx in one hundred. In only a small proportion was the sensory function of the mucous membrane of the pharynx deranged in any way, and then in association with corresponding derangement of cutaneous sensibility. In not one were the motor functions of the pharynx at all interfered with. There is thus left only the conclusion that the absence of reflex vomiting in cases of hysteria is due to disturbance in the reflex arc and that such abolition may be viewed as an hysteric stigma.

THE DANGER OF EYE INFECTION BY SPECTACLES.

It has for some time been a growing custom for ophthalmologists and opticians to lend London smoked or other tinted coquille spectacles to patients under mydriasis. The spectacles are returned after the passing of the mydriasis and are again lent to other patients. It is a dangerous custom that should be stopped. The writer has known of cases of infection

not readily explainable except as due to wearing glasses that others have used. As these tinted coquille glasses cost the optician but a few cents, we advise oculists either to give patients outright the pair required, or suggest that they be bought. Doubtless the better class of opticians would be willing to give their regular patients such glasses free of charge. But in all cases the patients should be warned against the use of second-hand, possibly infection-smeared articles.

CORRESPONDENCE.

Antileprous Serum.

NEW YORK, Jan. 18, 1897.

To the Editor:—Will you kindly state in your paper that I am considering the propriety of starting a Carrasquilla Institute in New York city. I have received from Dr. Carrasquilla of Bogota, Colombia, six consignments of antileprous serum, seventy-two bottles in all. Further consignments will be forthcoming at short intervals. Of the above consignments, I have sent a portion, respectively, to Dr. Hansen, Norway; Dr. O. Petersen, Inspector General of Leprosy for Russia, St. Petersburg; and the President of the Hawaiian Board of Health, Honolulu. These gentlemen will experiment with the serum and make a report of results obtained at the first Leprosy Congress, to be held in Moscow, August 19 to 26, 1897.

Carrasquilla, in his latest letter to me, dated Dec. 13, 1896, says: "The efficacy of the antileprous serum tried for one year, on a large number of patients, leaves no doubt, as you will find out yourself. The process gives all kinds of securities, which makes me hope that you will recommend it to the attention of others and persuade them to study it."

The above-named countries, Norway, Russia and the Sandwich Islands, have had the following experiences with leprosy: In Norway, 1856, there were 2,877 lepers; from that to 1891 there were 4,758 additional cases, in all 7,635. In 1885, the mixed isolation law, that is, isolation in hospitals and in families, was passed. Under that law leprosy has decreased to 800 cases, which is the present number. Is it any wonder that the physicians of Norway believe in contagion?

In Russia, whose population is 124,000,000, during the period in which it was generally believed that the disease was not contagious, the leper hospitals were closed; leprosy increased apace. In 1879, Professor Münch of Kiev, and Professor Petersen, began to study the disease, and reached the conclusion that climate, situation and food have nothing to do with its spread. In 1894, a commission having been appointed by the government to study the question of leprosy, reported that they had come to the conclusion that leprosy is contagious; they consequently advised the segregation of *all* lepers. According to Dr. Petersen, there are 5,000 lepers in European Russia.

In the Sandwich Islands, leprosy was imported in 1848, or 1819 as some say. Before 1848, at any rate, the disease was very rare, or else it worked unknown to the inhabitants. Hildebrand, in 1853, was the first to report a case of leprosy. In 1861, there were six lepers in the neighborhood of this original case. From that time, the disease spread in an unheard of manner. In 1865, there were 230 lepers in a population of 45,000. In 1881 and 1882, there were 4,000 lepers. Thus in thirty-five years, one-twelfth of the population had become lepers. *Et nunc erudimini*, says Dr. Robelin, from whose work (Es o no Contagiosa La Lepra) I quote these figures as to Hawaii, strict isolation laws came at last, in 1865. Today there are only 1,250 lepers.

While the New York County Medical Society had these facts before them, or could, or ought to have had them before them, yet they have approved a report of their committee on leprosy, composed of the Health Commissioner of New York, and several professors of dermatology, to the effect that leprosy is not a dangerous disease, and that isolation is not necessary.

In Colombia, while there was no isolation, leprosy increased in forty years from 400 to 27,000 cases. The government now is very much alive to the situation. The church has raised $200,000 for a National Lazaretto. It is believed there generally that the solution of the problem is either the Carrasquilla serum cure, if it shall prove effective, or absolute isolation, and the question is taken very fearfully to heart; they can not afford there to declare jauntily that leprosy is not dangerous.

The lepers are, at the present time, crowding Bogota, to receive the possible benefits of Carrasquilla's treatment. Their crowding there has become a real nuisance.

According to the report of the Health Commissioner of New York, there is no danger of the spread of leprosy in New York climate. Therefore this is the place for starting a Carrasquilla Institute for the treatment of the lepers in the United States. The different States, Minnesota, Wisconsin, etc., will be very glad to unload their leper populations into this favorable climate, if a chance of cure by Carrasquilla's serum is offered to them here. I should be disposed to inoculate any patient who shall be sent to me by the State Boards of Health, free of charge.

As soon as the bars are down, and the three lepers of North Brother Island are discharged by our Health Commissioner, when every pretense of isolation shall have been given up, and leprosy officially recognized as *not being dangerous*, no one can have any objection to the coming to New York of all the lepers of this country.

ALBERT S. ASHMEAD, M.D.

Chlorid of Sodium.

BOSTON, Jan. 13, 1897.

To the Editor:—Salt in excess of what occurs in natural food appears to be necessary with the human family as it is with animals. Both a deprivation of it and a large excess of it, especially in the absence of vegetable food, works evil to the body, producing various sorts of disease both in body and in mind. Salt exists in all the fluids of the body. It appears to stimulate every tissue and have an influence over the metabolic changes in every part, and at all times. Yet how far these changes can be usefully modified by diminishing or increasing the ordinary amount of salt is not settled. Sure it is that some cases in practice have been improved by decreasing the salt supply, while others have gained on increasing the usual daily amount of it. Küss says it is indispensable to the formation of bile and the pancreatic and gastric juices. Animals grow better and fatten on it. They have more glossy and thicker hair, have a more healthy appearance and are more sprightly and active; while the potassium salts have the opposite effect and are more or less serious in their consequences. Salt stimulates the kidneys, and all the proteid qualities have a peculiar dependence on the presence of the various salts. Common salt promotes secretion, aids osmotic action, promotes fluid diffusion throughout the entire system. It stimulates nervous action as a whip stimulates a horse and clears and brightens the eyes.

Now, can it be that an agent which has so general influence throughout the body, in exciting the nerves and promoting secretions and the various metabolic physiology, should fail to have a more or less direct effect upon the organs and functions essential to procreation? This is a question which presented itself in the case of some friends of mine.

The two women concerned were well educated and of excellent character, but both were feeble and more or less invalids when married. Both married clergymen, were equally well and tenderly cared for. They both found plenty exercise, were were of studious habit and helpful to their husbands. The husband of one conceived the idea that his wife would be

stronger and better in health if she took more common salt than she was accustomed to take. More salt was put in her butter, on her meats and in the milk she used. Often he added to her regular proportion of salt in the water she drank. The result has been that she is a very well woman—a woman of great efficiency in the work as an aid to her husband, and she has increased the household by a daughter and a son. They are still poung people. The other husband took contrary views in reference to salt and denied to his wife as much as he could, thinking it injurious to use much salt. The result in her case is that she has remained weakly, nervous, neuralgic, etc., and can not spare strength for the ordinary household duties. Her lungs have become weak and her throat so sensitive that he is obliged to take her to the South for the winters. She has never been pregnant and has passed the age when women are likely to conceive. For one I am sure he has made a mistake. They have greatly desired a child. I have mentioned the other case to him and jokingly told him that I believe he has not salted his wife enough.

E. CHENERY, M.D.

Stomach Movements.

PARIS, ILL., Jan. 14, 1897.

To the Editor:—Regarding the stomach's emptying itself (see JOURNAL, page 83) I wish to say that Professor Freer demonstrated the movements of the stomach by vivisections, and that the contractions proceeded from right to left along the lesser curvature, rounded the cardiac end and proceeded from left to right along the greater curvature, moving its contents in that direction. When it reached the pylorus the latter opened and allowed a small quantity of liquid food to pass into the intestine. After a short rest the contractions began and proceeded in the manner described. In one case there were three distinct revolutions. Respectfully,

W. H. TEN BROECK, M.D.

"Thoracoplasty in America."

PHILADELPHIA, Jan. 15, 1897.

To the Editor:—I see in your issue of January 9, an article by Dr. A. H. Ferguson on "Thoracoplasty in America," in which he states that the Bureau of American Medical Literature at Washington, D. C., informed him that they were unable to find any case of Schede's operation performed in America. I beg to state that in the *Annals of Surgery*, June 1895, p. 721, I published a case with successful result, which was done without any knowledge that Schede had preceded me.

Yours very truly, W. W. KEEN, M.D.

SOCIETY NEWS.

The Twelfth International Medical Congress.

PRELIMINARY PROGRAMS OF THE SECTIONS.

[Translated for the JOURNAL.]

SECTION 1.—ANTHROPOLOGY, NORMAL ANATOMY AND HISTOLOGY.

I. *Anthropology.*—1. Measures to be taken to collect the largest possible number of exact data in regard to the anthropologic types among the Russians and the allogeneous population of Russia.

2. The most characteristic peculiarities of the Mongolian skull. Which Mongolian or other race presents these peculiarities most frequently and most pronounced?

3. How far does the cranial type of the present population of Russia differ from the ancient type of the Kourgan period? How can this modification be explained if found to exist?

4. Prof. Sergi's typical skulls. Their importance in the classification of the shapes of skulls.

5. Anomalies in the skeleton and external tissues. Have any of these anomalies a racial significance and can they be considered phenomena of atavism?

II. *Anatomy.*—1. Is the Latin nomenclature in anatomy elaborated by the German Anatomical Society to be adopted internationally?

2. By what means can uniformity of nomenclature in anatomy be introduced into Russian works on the subject?

3. Is polydactylia to be regarded as a division or a phenomenon of atavism?

4. Homology of the upper and lower members.

III. *Normal Histology.*—1. Comparison of the value of the various theories and hypotheses in regard to the structure of protoplasm in general.

2. Importance of the blastomeres in the segmentation of the ovum. Post-regeneration. Development of the interstitial and cuticular substances.

3. Importance of the centrosomes, spheres and supplementary nuclei. Importance of direct division (amitotic).

4. Genesis of the cell, *i. e.*, evolution of the constituent parts of the cellular organism.

5. Innervation of the glands.

6. Different modes of termination of the nerves depending upon certain mechanical conditions.

7. Development of the nerve fibers and cells; best methods of studying them.

8. Place and mode of the first development of the organs of the genito-urinary system.

9. Importance and genesis of the third constituent of the blood (Bizzozero's plaques), and their connection with coagulation.

10. Is there a physiologic migration of the leucocytes? Where does it take place? In what proportions? What is the principal rôle of these elements in the body?

11. Secretory ducts of the salivary glands, pancreas and liver, especially the initial capillary tubes.

12. Is it not possible to create a better classification of the animal tissues than those that now exist, based as far as possible on the largest number of facts?

13. Genesis of the encephalon in the vertebrates, man included.

14. Mechanical principles of the development of organisms.

15. Structure of nerve cells and their reciprocal relations in the nerve centers.

16. Modifications in the structure of the cells of the glands during repose and during the activity of the corresponding cells or glandular formations.

17. Termination of the sensory nerves in the heart.

18. Termination of the nerves in the nerve cells of the spinal ganglia.

19. Sensory nerves of the muscles (smooth and striated muscular fibers).

20. Forms and extent of elastic tissue in the animal organism, and its importance.

21. Structure and presence of the basement membranes in the animal body, and their importance to it.

SECTION 2.—PHYSIOLOGY AND PHYSIOLOGIC CHEMISTRY.

1. Importance of physiologic psychology in medical education.

2. Rôle of nitrogenous alimentation in the transformation of substances and forces in the animal organism.

SECTION 3.—GENERAL PATHOLOGY AND PATHOLOGIC ANATOMY.

1. Genesis of the different forms of diabetes.

2. Pathologic physiology of thrombosis.

3. Pathologic physiology of myxedema.

4. Theories in regard to immunity. Production and influence of antitoxins in artificial immunity.

5. Rôle of the vessels and parenchyma in inflammation.

6. Constancy of the various species of pathogenic bacteria considered in regard to their botanic classification and the specification of diseases.

SECTION 4, A.—GENERAL THERAPEUTICS.

1. Serum therapeutics and prophylactic inoculations.

2. Organ therapeutics.

3. Appreciation of the present methods of alimentation (artificial alimentation, forced alimentation, koumyss cure, grape cure, substitutes for alimentation employed in therapeutics).

4. Methods of treating fever.

5. Present methods of antiphlogistic treatment (phlebotomy, etc.).

6. Hydrotherapeutics.

7. Climatotherapeutics (seashore climate, mountain climate, sea voyages, etc.).

8. General therapeutics of the different organs (for example, new methods of treating diseases of the heart).

9. Electrotherapeutics.

SECTION 4, B.—PHARMACOLOGY.

1. Rapid and certain local treatment of severe erysipelas (epidermic method).

2. Rapid and certain treatment of epidemic cerebro-spinal meningitis (hypodermic method).
3. Treatment of pneumonia with guaiacol, applied externally.
4. Calomel as a medicament for the heart.
5. Treatment of recurring erysipelas.
6. Treatment of typhoid fever.
7. Value of the methods of using water in hydrotherapeutics: frictions and ablutions, fan douches and sitz baths.
8. Climatotherapeutics of pulmonary phthisis.
9. Disintoxication.

SECTION 4, C.—PHARMACOGNOSY AND PHARMACY.

1. Amanita phalloides: its botanic varieties, geographic distribution, chemic composition and physiologic action.
2. Classification and histology of the simple drugs of practical importance. Study of new, already known drugs, the knowledge of which is yet insufficient.
3. Organic and inorganic pharmaceutic medicines deserving special attention on account of their practical importance.
4. Best methods of determining the medicines of heroic action, from a chemico-legal point of view: the alkaloids, glucosids, so-called bitter substances, etc.
5. Cultivation of narcotic plants. Value of the medicinal preparations obtained from them.
6. Most certain methods of distinguishing the alkaloids in narcotic medicaments.
7. Best methods of preparing the bitter almond water.
8. Necessity of strict standard amounts of specific substances and of the alkaloids in extracts, tinctures and other medicaments of heroic action.
9. Establishmment of an international standard for the Galenic preparations (Galenica internationalia).
10. The drugs of domestic medicine considered histologically and chemically.
11. The serum and organ therapeutic medicaments from the pharmaceutic point of view.
12. Water from the hygienic and pharmaceutic point of view.
13. Microscopic examination of the identity and the actual value of the most important medical powders.
14. Products excreted by plants.
15. Most certain means to distinguish anatomically and chemically between the true illicium (Illicium verum, Hooker) and the false (illicium religiosum, Siebold).
16. Difference between the structure of the testa of black mustard (sinapis nigra L.), Russian mustard, called sarepla (sinapis juncea L.), and white or yellow mustard (sinapis alba L.).

SECTION 5.—INTERNAL DISEASES.

1. Essential causes of chlorosis.
2. Are the different forms of malarial fevers caused by Laveran's parasite or by still other species?
3. Climatic treatment of tuberculosis.
4. Relations of nervous dyspepsia to general neuroses—its symptoms and their pathogenesis.
5. Clinical classification of nephritis.
6. Pathogenesis of chronic nephritis.
7. Clinical forms of hepatic cirrhoses.
8. Pathogenesis of chronic lesions of the valves of the heart.
9. Pathogenesis of obesity.
10. Pathogenesis of gout.

SECTION 6.—DISEASES OF CHILDREN.

1. Diagnosis of pulmonary tuberculosis during early infancy.
2. Diagnosis of tuberculous meningitis.
3. Whooping cough complicated with influenza (grippe).
4. Diarrhea accompanying diseases of the respiratory organs.
5. Affections of the lymphatic system during childhood.
6. Normal properties of the blood and their modification in diseases of different ages.
7. Results of serum treatment of diphtheria and other diseases.
8. Results of "belt puncture" in hydrocephalus.
9. Arhythmic action of the heart in children.
10. Results of laparotomy in tuberculous peritonitis.
11. Organization and results of the work of Russian foundling asylums, or asylums for abandoned children in general.
12. What is the difference between natural and artificial alimentation of children from the standpoint of physiology and pathology.
13. Hereditary syphilis.
14. Hemorrhaghic diathesis and geographic distribution of rhachitis.
15. Influence of school work on the physical development of children.

SECTION 7.—NERVOUS AND MENTAL DISEASES.

I.

1. Pathology of the nerve cell (normal microscopic anatomy and pathologic lesions).
2. Pathogenesis and pathologic anatomy of syringomyelia.
3. Pathogenesis and treatment of tabes dorsalis.
4. Operative treatment of diseases of the brain.

II.

1. Hallucinations and fixed ideas.
2. Pathogenesis of the general paralysis of the insane; delimitation of this disease from kindred morbid manifestations.
3. Hypnotism and suggestion in relation to mental diseases and medical jurisprudence.

SECTION 8.—DERMATOLOGY AND VENEREAL DISEASES.

1. Cutaneous actinomycosis.
2. Primary cutaneous tuberculosis.
3. Cutaneous arthritis.
4. Cutaneous sarcomatosis.
5. Acanthosis nigricans.
6. Pathogenesis of area Celsi sive Jonstoni.
7. Gonorrheal dermatoses.
8. Mercurial dermatoses.
9. Cutaneous paludal eruptions.
10. Treatment of simple scleroma (scleroderma).
11. Treatment of Frisch's scleroma (rhinoscleroma).
12. When should the treatment of syphilis with mercury be commenced? How long should it be continued? Should syphilis be treated at the time when the syphilitic accidents make their appearance, or should the treatment be provisional without waiting for the appearance of the syphiloderms.
13. Modifications in the elements of the blood in syphilitics during the condylomatous period.
14. Syphilis and serum therapeutics.
15. Treatment of syphilis with soluble and insoluble mercurial preparations.

SECTION 9.—SURGERY.

1. Methods of treating infected wounds.
2. Methods of treating malignant neoplasms without operating, especially the results of treatment with serum therapeutics.
3. Cerebral surgery in cases of tumors and Jacksonian epilepsy. Results of operative procedures.
4. Surgery of the lungs, principally from the standpoint of the formation of tuberculous caverns and of gangrene of the lungs.
5. Treatment of cancerous strictures of the esophagus, pylorus and rectum. Results of the different methods of treatment.
6. Gonorrheal and syphilitic affections of the articulations.
7. Principles of the construction of protheses of the lower extremities in affections of the articulations, paralyses, congenital luxation of the femur and after amputation.

SECTION 9, A.—DISEASES OF THE TEETH.

1. Nature and treatment of pyorrhea alveolaris.
2. Hygiene of the oral cavity and of the teeth.

SECTION 10.—MILITARY MEDICINE.

1. In what respects should the Geneva Convention be examined again to avoid differences of interpretation of its various articles, and what changes should be made in it on account of the transformation of armaments and the increase in the number of combatants?
2. Organization of the search for the wounded on the battle field.
3. First dressing for bullet wounds. What is the best?
4. Most convenient surgical case for the treatment of fractures caused by firearms.
5. Best styles of litters for the wounded.
6. Most convenient and inexpensive ambulances for the transportation of the wounded. Transportation of the wounded.
7. Transportation of the wounded in narrow gauge railway field cars.
8. The supply of drinking water for armies in the field.
9. In what way and to what extent can uniformity in the military medical service be secured?

SECTION 11.—DISEASES OF THE EYE.

1. Operative treatment of myopia (Fukala's method).
2. Trachoma and its treatment.
3. Therapeutic value of sub-conjunctival injections.

SECTION 12, A.—DISEASES OF THE EAR.

1. Inflammation of the middle ear in new-born infants.
2. Classification of the inflammations of the middle ear according to the products of the inflammation.
3. Physiologic importance of the special parts of the labyrinth, especially in regard to the question whether complete deafness is caused by a partial alteration of the labyrinth.

4. Treatment of attico-mastoid suppurations and of the subsequent intracranial affections.
5. Contribution to the study of cholesteatoma.
6. Diseases of the ear originating in inflammation of the cranial sinuses (maxillary, frontal or sphenoidal).
7. Comparison of the value of simple trephining and the large opening of the cavities of the ear in chronic otorrhea.
8. Surgical treatment of sclerous otitis and its therapeutic value.
9. Acute adenoiditis in adults.
10. Study and treatment of internal complications in purulent inflammation of the ear.
11. Primary affections of the bony walls of the labyrinth.
12. Therapeutic importance of exercises of the ear for deaf persons and the deaf and dumb.
13. The dimensions of the auditory cavities regarded as a predisposing cause of diseases of the ear.
14. Pathology and treatment of sclerosis of the tympanic cavity (its difference from other similar lesions of the labyrinth).

SECTION 12, B.—DISEASES OF THE LARYNX AND NOSE.

1. Suppuration of the nasal sinuses (the maxillary excepted). Diagnosis and treatment.
2. Cancer of the larynx. Diagnosis and treatment.
3. Causes and treatment of loss of voice in singers.
4. Progress realized since the last Congress in the local treatment of tuberculosis of the larynx.
5. Autoscopy of the larynx.
6. Laryngo-straboscopy.
7. The X ray applied to rhino-laryngology.
8. Esophagoscopy.
9. Photography of the larynx.
10. Report of the committee in regard to obligatory standards in the construction of rhino-laryngoscopic instruments and apparatus.

SECTION 13.—OBSTETRICS AND GYNECOLOGY.

I. OBSTETRICS.

1. Symphysiotomy.
2. External exploration.
3. Serum therapeutics in puerperal septicemia.
4. Connection between gonorrheal infection and puerperal affections.

II. GYNECOLOGY.

1. Colpotomy in cases of inflammation of the uterine adnexa, in displacements and neoplasms of the uterus.
2. Gonorrhea and its treatment in non-pregnant women.
3. Surgical treatment of peritonitis.
4. Comparison of the operative methods of treating cancer of the uterus in regard to their prevention of relapses.

SECTION 14.—HYGIENE, ETC.

This program will be announced later.

SECTION 15.—LEGAL MEDICINE.

1. Creation of an institute to instruct physicians in medical jurisprudence and consequent modification of the conditions of medico-legal instruction. Necessity of requiring a special diploma of medico-legal experts.
2. The necessity of a more extensive application of the method of microscopic investigation in legal medicine. Application of bacteriology to legal medicine. Medico legal demonstration of the presence of gonococci.
3. Present status of the question of ptomains in legal medicine.
4. Present status of the question of vital proofs and the conditions which affect their reality.
5. Value of the indications of death from asphyxia. Conditions favorable to the genesis of sub-pleural ecchymoses. Ecchymoses and their relations to strangulation.
6. The glycogenic function of the liver in its relations to medico-legal expert testimony.
7. Anatomo-pathologic indications of death caused by cold.
8. Medico-legal investigation of death caused by chloroform.
9. Cauterizing action of arsenious acid and its salts.
10. Responsibility of hysteric subjects.
11. Penalty to be applied to crimes in the sphere of the sexual functions.
12. The criminality accepted by the Lombroso school. Does it exist?
13. Death from shock.
14. Cadaveric rigidity.
15. Peculiarities of the decomposition of the cadaver of the fetus and the new-born infant.
16. How to distinguish human blood from the blood of mammals in medico-legal investigations.
17. Criminal morcellement of the cadaver and means to determine the particulars of the cutting process and the length of time that has elapsed.

Association of Military Surgeons of Ohio.—In response to a call of the Surgeon General of the State, the medical officers of the Ohio National Guard met in the retiring room of the House of Representatives, in the State House, Thursday afternoon, Dec. 17, 1896. A constitution and suitable by-laws were adopted, forming the "Association of Military Surgeons of the State of Ohio," with active members consisting of the medical officers of the Ohio National Guard, associate members consisting of ex-medical officers of the Ohio National Guard and ex-medical officers of the United States Volunteer service and honorary members. The following officers were elected: President, Brig. Gen. J. E. Lowes, surgeon general of Ohio, Dayton; vice-president, Maj. L. T. Guerin, surgeon Fourteenth Infantry, Columbus; secretary, Maj. H. M. W. Moore, surgeon First Light Artillery, Columbus; treasurer, Maj. Frank Bain, surgeon Second Infantry, Kenton; executive committee, the foregoing officers and Maj. E. C. Farquhar, surgeon Eighth Infantry, Zanesville; Capt. Gilbert I. Cullen, assistant surgeon First Infantry, Cincinnati; Lieut. (junior grade) C. W. Newton, surgeon First Battalion, Naval Brigade, Toledo. Lieut. Col. William E. Walters and Capt. James E. Pilcher, of the Army, were elected honorary members.

NECROLOGY.

WILLIAM WALLACE, M.D. of Brooklyn, died December 22, in consequence of an attack of locomotor ataxia of about three months duration. He was born in Cork, Ireland, in 1835, and studied at Rothesay, Scotland, and at Foyle College in Londonderry. In 1851 he took up the study of medicine in Edinburgh, in 1856 was graduated from the Royal College of Surgeons and in 1860 from the Royal College of Physicians. During the year 1855 he acted as an assistant surgeon in the royal navy in the Russian war. It was in 1864 that Dr. Wallace came to Brooklyn to pursue the practice of his profession. Three years later he married Miss Ellen Louise Ladd of Throggs Neck. During his residence in Brooklyn Dr. Wallace was actively engaged in educational and philanthropic work. He was attending physician to the outdoor department of the Long Island College Hospital, and was visiting physician to the Long Island College Hospital, St. John's Hospital, Home for Consumptives, consulting physician to the Long Island Hospital and St. Mary's Hospital, and later, medical director of the college dispensary. He was also appointed a member of the council of the Long Island College Hospital, of the hospital committee of St. Mary's Hospital and of the board of managers of the Church Charity Foundation. He was at one time president of the Pathological Society, censor of the Kings County Medical Society and a delegate to the State Medical Society. Dr. Wallace leaves a widow and two sons, one of whom is a physician and was associated with his father in practice. Dr. Wallace was a man of sterling worth and wide popularity.

JOHN D. BRUMLEY, M.D., New York Medical College, 1858, died in Newark, N. J., January 8, aged 62 years. He became a Union army surgeon in 1863, and his first assignment was with the Seventh Michigan Volunteer Infantry, just before the "seven days' fight." He was captured and confined in Libby prison for a month. After his release on exchange he served to the end of the war. He was afterward a United States examining surgeon for pensions and for years the commandant of the New Jersey Home for Disabled Soldiers in Kearney. He held several public offices in Newark, was a member of several medical associations of New Jersey and Essex County and a member of the Society of the Army of the Cumberland.

BENJAMIN F. KETCHUM, M.D., New York University Medical College, 1860, formerly surgeon of the Twelfth Vermont Infan-

try, U. S. V., and mustered out Oct. 4, 1862, died suddenly of angina pectoris at the Brooks House, Brattleboro, Vt., January 9. He was born in Troy, N. Y., Dec. 25, 1837.

PATRICK H. BRYANT, Passed Assistant Surgeon, U. S. N., died at Newport, R. I., on board the training ship Constellation, Dec. 29, 1896.

BOOK NOTICES.

The Diary of a Resurrectionist 1811-1812, to which are added an account of the resurrection men in London, and a short history of the passing of the Anatomy Act. By JAMES BLAKE BAILEY, B.A., Librarian of the Royal College of Surgeons of England. 8vo. Cl. Illustrated. Pp. 184. London: Swan, Sonnenschein & Co., 1896.

The student of medical history can not fail to be interested in the story of the troubles of William and John Hunter, Matthew Baillie, the elder Cline and Sir Astley Cooper in the matter of anatomy. That interesting work by Bransby Cooper, "Life of Sir Astley Cooper," refers in several places to the diary which is now reprinted by the Librarian of the College of Surgeons, to which institution the MS. was presented by the late Sir Thomas Longmore, who during his pupilage was dresser to Bransby Cooper.

The diary itself is of little intrinsic value, but as a collateral reference to the times immediately preceding the passage of the British Anatomy Act, it is of great interest. The gruesome details of the accounts of Mr. Josh. Naples, the chief resurrectionist, belong to the chapter of horrors fortunately closed by the more enlightened legislation of the last half of the nineteenth century, whereby the trade of the resurrectionist was relegated to the pages of history.

The reader will find in this volume, among other interesting matters gathered by Mr. Bailey, a copious extract from Southey's "Surgeon's Warning." After the surgeon died, notwithstanding his elaborate preparations to prevent the dissection of his body, the "'prentices" finally got his body in a bag.

> "So they carried the sack pick-a-back,
> And they carved him bone from bone,
> But what became of the surgeon's soul
> Was never to mortal known."

The Surgery of the Chest. By STEPHEN PAGET, M. A. Oxon., F. R. C. S. Illustrated. New York: E. B. Treat, 5 Cooper Union. Pp. 479. 8vo cloth. 1897.

This is a timely contribution to the literature of thoracic surgery. The author's interest in the subject is profound and it has led him to produce a monograph that for suggestiveness and at the same time true conservatism has few equals.

We are pleased that Mr. Paget has the courage to state the case fairly against the great mutilations which have lately come into vogue, and to reassert the advantages of the classic Greek practice in cases of empyema.

Full credit is given to our American authors on this subject and indeed it may be fairly claimed that few recent important articles written on this side of the water have escaped him. But little note, however, has been taken of the American or English systematic treatises on general surgery, many of which contain reference to cases, but ancient and medieval literature have been thoroughly examined and modern medical periodicals exhaustively searched.

The work is of great value to every general practitioner of medicine and surgery.

Two Health Seekers in Southern California. By WILLIAM A. EDWARDS, M.D., and BEATRICE HARRADEN. 16mo, cl. Pp. 144. Philadelphia: J. B. Lippincott. 1897. Price $1.00.

Dr. Edwards says in the preface, "I have long felt that an impartial account of Southern California, devoid of the fulsome praise of guide books and land office advertisements, would be of interest and help to a large class of health seekers. If invalids would bear in mind that no climate is perfect, much disappointment would be saved. Again, if physicians would explain to their patients the absolute necessity of coming earlier in their disease, much suffering could be avoided."

Dr. Edwards has given his conclusions after a residence of eight years and Miss Harraden after two and one-half years' sojourn.

The style of the book is pleasant and the conclusions, we doubt not, are accurate. The work will be of good service in teaching the valetudinarian what to expect from the Southern Californian climate.

The Retrospect of Medicine. A half-yearly journal containing a retrospective view of every discovery and practical improvement in the medical sciences. Edited by JAMES BRAITHWAITE, M.D., London, assisted by E. F. TREVELYAN, M.D., B.Sc., M. R. C. P. Volume 113. January to June, 1896. 8vo, cl. Pp. 464. London: 1896, Simpkin, Marshall, Hamilton, Kent & Co., Ltd. Price 6s. 6d.

This volume is fully up to the standard of its predecessors and we are pleased to see that American literature is given a large space in the work. "Braithwaite" is one of the most popular, comprehensive and useful in the collection of "year books" that come to our table.

PUBLIC HEALTH.

Health Statistics in Family Archives.—A writer in the *Journal d'Hygiène* suggests that if families would preserve in their archives full records of the important illnesses, accidents, operations, etc., as they occur in them, with detailed reports of necropsies, "which should be more frequent," they would possess immense scientific and historic value and interest in time and prove of great service to the health of future generations. He cites the queen mother of Henry IV., who left commands that her head should be dissected in order to discover the cause of her frequent severe headaches, that the information thus obtained might be applied to prevent the same trouble in her children.

Anthrax at Sing Sing Prison, New York.—A convict in Sing Sing Prison has recently developed a case of malignant anthrax, the result of scratching a pimple on his neck with his finger nails. He had been handling curled hair, such as is used in upholstery work, and it is supposed that the anthrax spores had collected under the nails. He has had violent hemorrhages from the nose and mouth, and his left side is completely paralyzed, but Dr. R. T. Irvine, the prison physician, thinks his chances of recovery are good. It is said that only about a dozen cases of this disease in man have heretofore been reported as occurring in New York State.

Origin of Epidemics of Cholera.—The *Progrès Méd.* of December 12, quotes Courtellement, who has just returned from a trip to Mecca, that epidemics of cholera do not originate there, but that it is brought from India by Indian pilgrims, who flock in great numbers every year, attracted as much by commercial interests as by religious sentiment. Protégés of England, they come to sell English products, which explains the consideration with which they are treated at Bombay and Aden. Arrived at Mecca, the cholera they bring attacks the crowds of other pilgrims there, exhausted by their travels, while according to M. Courtellement, it could be easily stamped out if the simple necessary precautions were taken on the arrival of the pilgrims from India.

Memorial to Michigan Members of Congress, Relative to a Permanent Census Service of the United States.—At the regular meeting of the Michigan State Board of Health at Lansing, Jan. 8, 1897, the following preamble and resolutions were unanimously adopted:

WHEREAS, The bill "to provide for a permanent census service" reported to Congress by Hon. Carroll D. Wright, will

be of great usefulness to the sanitary service of this State, as follows: 1. By providing a more frequent statement of population, thereby affording a basis for reliable vital rates and the more accurate calculation of intercensal populations, upon which such rates depend. 2. By providing means for ascertaining, for the first time in the history of the census, a reliable representative death rate for the State which will be comparable with those of other States and countries, Michigan being now a so-called non-registration State. 3. If Michigan shall become a registration State by act of the present Legislature for the immediate registration of deaths, by providing an annual comparative compilation of its data in connection with those of other registration States, thereby greatly increasing the usefulness of the Michigan statistics; therefore be it

Resolved, That the Michigan State Board of Health, at its quarterly meeting held at Lansing, Jan. 8, 1897, urgently recommends the passage of the bill for a permanent census service, on the ground of the improvement that will result therefrom to the sanitary interests of the country; and further,

Resolved, That a copy of this resolution be sent to each Senator and Representative from Michigan in Congress, with the request that they labor for the passage of the measure.

HENRY B. BAKER, Secretary.

MISCELLANY.

A Milwaukee physician has forwarded $5.00 in currency to Dr. Henry P. Newman, Treasurer, without enclosing his name. The amount will be properly credited if he will send in his name and give date of transmittal.

The President of the Republic of Brazil was recently operated on for vesical calculi by Professor Alfonso of Rio Janeiro, with an uneventful recovery.

Prognosis by the Servant Girl.—Sick man: "Is this the West-end Sanitarium?" New Girl (mystified): "This is Dr. Brand's house." "Yes, but doesn't he take sick people to nurse sometimes?" "Oh! maybe he does. There's two or three skeletons in the back office."—*Philadelphia Record.*

The Largest of Coffins.—One of the strangest coffins ever told of is that for which the British War Department is said to be responsible. The story is told that a workman engaged in casting metal for the manufacture of ordnance in the Woolwich Arsenal lost his balance and fell into a caldron containing twelve tons of molten steel. The metal was at white heat and the man was utterly consumed in less time than it takes to tell it. The War Department authorities held a conference and decided not to profane the dead by using the metal in the manufacture of ordnance, and the mass of metal was actually buried and a Church of England clergyman read the services for the dead over it.—*Notes and Queries.*

Sickness Does Not Excuse Tenant Holding Over.—The fact that a member of his family is sick and it would endanger the life of the latter to be moved, the appellate division of the supreme court of New York holds in the case of Herter v. Mullen, Nov. 6, 1896, does not furnish a valid excuse for a tenant holding over after the expiration of his lease, so as to relieve him from the operation of the rule of law that where a tenant holds over, without the consent of the landlord, the landlord may elect to treat the holding over as creating a new lease for another year, and it will not make it otherwise for the tenant to notify the landlord in advance that he does not propose to keep the property another year.

Separate Account Books for Patients.—It is not probable that any great number of physicians keep separate account books for different patients. But the case of one who did comes to light where he filed a claim for medical services to the decedent, *in re* Fulton's Estate, upon which the supreme court of Pennsylvania passed Oct. 5, 1896. Here, when proof of the claim was to be made, a separate book was produced, containing no charges except against the decedent. The physician explained that this book was so kept at the decedent's request. Its character, however, the supreme court holds to be an insuperable objection to the book, which it rejects as not being one of entries in the regular course of business. The regularity of an account as to its place in the ordinary books of the business, the court says, is as necessary as its regularity in other respects.

Dr. Colden's Coach.—In 1732 there was but one vehicle on Manhattan Island that bore any resemblence to a coach, and forty years afterward there were only half a dozen coaches. There were several chaises, but carts were the common conveyance. In 1772, according to authentic local history, there were five private coaches in use here. One belonged to the Governor, one to Lieutenant Governor Cadwallader Colden, M.D., one to William Walton, one to Mr. Murray, for whom Murray Street was named, and the fifth was the property of Mrs. Alexander. Carpets were unknown in New York at this period, for "all the houses were sanded with white or silver sand, in figures and devices."—*New York Tribune.*

The Beginning of a Medical Code for Austria.—After a long and animated discussion, the Medical Chamber of Vienna has at last adopted the following recommendations as to the mutual relations of physicians, patients and the public. The first article, referring to the intercourse of physicians between themselves, declares that the maintenance of the honor and dignity of his profession is the medical man's first duty. Misunderstandings as a rule arise from the fact that patients seek further advice without previously informing the practitioner already engaged. If a medical man knows that a patient who consults him is already under the care of another practitioner, he ought to decline further attendance and ought not to express an opinion as to the diagnosis or treatment of such a case unless he has conferred with his colleague who has first been called; he should not refuse a consultation on the ground of the alleged inferior position or attainments of the proposed consultant. If two physicians do not agree a third is to be called. Fees ought to be claimed at the time; gratuitous treatment is only admissible in the case of poor patients. A medical man is not obliged to attend a patient, but he ought not to withold assistance in urgent cases. Reticence as to the patients' confidences is already prescribed by law.—*London Lancet.*

Location of Hospital.—Under chapter 157, General Laws of Minnesota of 1895, entitled "An act to create a commission to locate, acquire land and prepare plans for a fourth hospital for the insane," the supreme court of Minnesota holds, in the case of State v. Bondy, Nov. 19, 1896, that the location of a site within the meaning of the act signifies and includes not merely a determination as to that part of the State where it should be located, but also a selection and designation of the precise tract or parcel of ground upon which the hospital should be located, and until this was done the location was incomplete, and therefore the commission still had the power to reconsider any partial or tentative action which it had taken upon the subject. The court further holds that conceding, without deciding, that after the commission had once located a site, its power would be *functus officio* and therefore without power to reconsider or change its location, yet upon the facts appearing in the record in this case, the *viva voce* vote on the location of a site, by which the commission voted to locate it at Hastings, did not amount to a complete location or selection of the site within the meaning of the act, nor did it amount to such an acceptance of the offer of the city of Hastings as to make it a binding contract between the parties and hence it was within the power of the commission to locate the site elsewhere.

Italian Surgical Congress.—The seats of learning and scientific research in Italy are not centralized as in most countries, but all over the land are small groups of enthusiastic investigators clustered around some progressive professor, constantly at work according to the most advanced methods of modern bacteriology, experimental pathology, etc. The Congress at Rome

in October brought out numerous communications of the results attained, which time may possibly prove to be of great importance. We notice among them Salomoni's report of some experimental surgery of the heart on dogs, which survived wounds into the heart—sutured by the usual methods—and showed only slight pericardial adherences when killed two to three weeks later. Farina recently sutured successfully the left ventrical of a patient who was recovering when a fatal intercurrent disease occurred. Sgambati has secured one success in his experiments on dogs to ascertain if normal epithelial tissue implanted in the pulmonary arteries would continue to grow and proliferate like abnormal cancer tissue. He used the skin of the submaxillary gland and of the testes, in an endo-venous injection after soaking them a while in salt solution at 38 degrees C. The dogs were killed afterward and the hemorrhagic infarcts found in the lungs examined. Most of the results were negative, the embolic elements being found in a more or less advanced stage of degeneration, but in one case the experiment had succeeded and the epithelial elements from an organized thrombus in the testicular epithelium had located and proliferated presenting the picture of a tubular adenoma. These experiments are the first by the embolic method although Cohnheim and Maas have transplanted embryonal tissue and observed its reproduction *in situ*. Gangitano also announced that numerous experiments have shown that occluding the cystic duct by tying it or closing the lumen with aseptic small stones was invariably followed by atrophy of the gall bladder. On the other hand, if septic substances were introduced, such as non-sterilized stones, saliva, etc., into the gall bladder after the cystic duct was tied, hydrops invariably followed. He considers therefore that hydrops in man is due not only to the obstruction of the duct but also to infection. He advises consequently in cases of galistones when the biliary passages are free from infection and otherwise normal, not to perform cholecystostomy or cholecystectomy, but merely to tie the cystic duct. —*Cbl. f.Chir.*, December 19.

A Delirium of Loquacity.—The *British Medical Journal*, December 5, has a cautionary word about orators, political and other, that may profitably find lodgment in this orator-ridden country. It says in part: "We live, in fact, in a whirlwind of words, a delirium of talk; and this unwholesome environment leads to the development of a neurotic condition of the political and social organism which is fraught with the gravest danger to the commonweal. More than once in recent years the excitement of oratory has led to attacks of hysteria affecting large numbers of the public, and it is conceivable that a state of acute National frenzy might be brought about by the same cause. It is hardly too much to say, therefore, that the mere orator is a danger to society. Dr. Le Bon has told us what the madness of crowds may lead to, and the orator has the power of engendering this madness and stimulating it to the highest pitch of destructive fury. Not only does the orator act upon the crowd, but it reacts upon him. He becomes intoxicated with the exuberance of his own verbosity, and is carried into excesses of speech which, when translated by those whom he has influenced into action, he would in his saner moments deplore. A curious illustration of the possible dangers of oratory was afforded recently by the lunatic who lectured on his own disease at Vienna. The lecture, we are told, was admirable as a display of oratorical art; the wealth of ideas was only equaled by the brilliancy of expression. The effect of such a discourse on a popular audience may easily be imagined. The speaker might in this country have carried on a campaign against the lunacy laws, the iniquities of 'mad doctors,' and the horrors of madhouses, which would have led to an agitation for the setting free of all lunatics and the abolition of asylums. And if 'a tale told by an idiot, full of sound and fury, signifying nothing,' could do this, what might not a course of inflammatory orations by a master of the art of making the worse appear the better reason, on subjects as to which the people are without authoritative guidance, accomplish? Plato banished poets from his republic, and we are inclined to think that it would be for the good of mankind if a similar course were adopted with orators."

Not Bound to Employ Physician or Avoid Hysteric Outbreaks.—In a personal injury case it was asked that the jury be instructed: "If the plaintiff was injured by the collision, he was bound by law to use ordinary care to render the injury no greater than necessary. It was therefore his duty to employ such medical assistance as ordinary prudence in his situation required, and to use ordinary judgment and care in so doing." This, the supreme court of Illinois holds, in the case of Chicago & Erie Railroad Co. v. Meech, Nov. 9, 1896, stated a correct but abstract rule of law, which, because it was likely to mislead the jury for want of directions in regard to its proper application to the case in hand, was properly refused. It points out that the jury would probably have understood from such an instruction that although there was culpable negligence on the part of the defendants, and consequent injury to the plaintiff, yet if any aggravation of injurious consequences was caused by subsequent negligence of the plaintiff, then there was no cause of action, even for such consequences as necessarily resulted from the injury. The doctrine, it affirms, is that where, after the occurrence, the plaintiff by his own negligence increases the damage, then the defendant is liable only for the consequences of his own acts and not for those of the plaintiff, or of those of a third person, which are separable from the results of his own acts. The court also holds in this case that the fact that a plaintiff or defendant or witness, or any other person, suddenly swoons or faints, or gives vent to hysteric exclamations, or breaks down with hysteria, does not call for the granting of a new trial, though, of course, if it appeared that the dramatic occurrence that took place in the midst of the trial was intentional and for an improper motive, it would afford ground for setting aside the verdict.

Placental Vestigial Origin of Uterine Tumors.—Dr. Adami in the Montreal *Medical Journal* discusses the influence of placental tissue upon the uterus, finding reason for holding that portions of the fetal epiblast that may be left behind after the separation of the placenta may continue to grow and assume the characters of a definite tumor growth. That uterine tumors may thus develop from placental relics is now pretty well recognized by pathologists. "The placenta is in the main a fetal structure, nourished by the maternal blood, and being in the main fetal, it is possible that such tumors can be of fetal origin. Meyer has described an epitheliomatous growth which followed the removal of a hydatiform mole, in which the resemblance of the invading columnar processes to chorionic villi was especially noticeable. Meyer, it is true, did not venture to describe the growth as entirely fetal, but imbued with the present German view, suggested that the epithelial element was of maternal origin and that the chorionic villi had protruded into it, a view which our present knowledge of placental structure renders eminently improbable. But Frænkel has published a case of 'carcinoma developing from chorionic villi.' Here also malignant disease of the corpus uteri followed removal of a vesicular mole. This growth had a papillary form, invaded the deeper tissues and gave rise to metastases. Microscopically it was shown to have originated from the remnants of chorionic villi left after the removal of the mole, since the structure of the uterine glands was still recognizable and its histologic appearance was quite different from that of cancer of the endometrium of the corpus uteri. The writer has been unable in a hurried search to discover other cases of this nature, but these two would seem to support the view that (not only can cells derived from one tissue invade others and form metastases, but also that) cells originating from

another individual—the embryo—are capable of assuming similar powers of invasion and metastatic growth. That this process of invasion should be developed by the multiplication of parasites within those cells seems to me most unlikely, when it is remembered that these same cells of the chorionic villi, under physiologic conditions manifest this same power of invasion to a considerable, if strictly limited, degree; or otherwise these facts brought forward by Professor Young seem to be wholly in accord with the argument adopted by me in the article to which I have already referred. A consideration of another most interesting form of tumor of placental origin—the so-called malignant deciduoma—must be left for another occasion. To discuss the various theories propounded as to its nature would unduly prolong this article. Sufficient has been already brought forward to show that a fuller knowledge of the placental structure materially advances our views in many directions."

The Teaching of Pediatrics in London.—At this season of the year it is usual for the various medical schools in London to attract by advertisements and prospectuses as large a number of new students as possible. We, as a journal devoted to the diseases of infants and children, are concerned only in that particular branch of the student's education, probably the most important, and, in London at any rate, the worst taught of any of the numerous subjects which the student has to study during his hospital career. It can hardly be disputed that, in the interests alike of the public and of the profession, every newly qualified man should commence practice with a thoroughly practical knowledge of the diseases of infants and children; not only because children's ailments constitute a very large percentage of the work of the general practitioner, but because of the livelong influence for good or evil which the medical treatment effects upon their future existence—nor indeed can it be maintained that the physical examination of children, which is so necessary for accuracy in diagnosis, is an easy accomplishment, or one which is likely to be mastered without considerable practice. It is then obvious that the General Medical Council of Great Britain should insist upon each and every examining body thoroughly testing the student's practical and theoretical knowledge of pediatrics before granting him his diploma, and that the authorities of every medical school should be called upon to provide facilities for its pupils to obtain the requisite tuition. We at any rate are disposed to regard the diagnosis and treatment of children's diseases as among the most difficult of the varied duties of the general practitioner, to be learned thoroughly only by special training, and it consequently behooves us to call attention to the attitude at present adopted toward this question by the examining and teaching authorities in London. We must confess to a feeling of the keenest disappointment that none of the examining bodies in London insist upon the student taking out a course of special study of pediatrics, and as we find that this grave omission in their schedules leads to an almost total neglect of the subject in the medical schools, we propose in future numbers to criticise the very imperfect arrangements which at present exist at the different general hospitals in London, and to suggest reforms which we consider are urgently required.—*Pediatrics*, November.

Liability of Non-resident Specialists.—The decision of the supreme judicial court of Maine, in the malpractice case of Feeney v. Spalding, which was rendered April 8, 1896, is now accessible to the public. It grants the defendant's motion for a new trial. He is a physician and oculist, practicing in Portland. In the summer of 1891, while on a trip to Machias, to visit patients, he stopped over a short time at Cherryfield. While he was there, the plaintiff, at that time a girl seven years old, who had been cross-eyed in one eye since she was a year and a half old, was taken to him by her father for examination and operation if thought desirable. After an examination by the physician, he performed the usual operation for a difficulty of this kind, bandaged the child's eye, gave certain directions to the father, and proceeded upon his journey. Prior to the operation, it was alleged, that the sight of this eye was, at least, fairly good; that, in fact, no defect whatever in the vision had ever been complained of by the plaintiff or observed by her parents or teacher; and that, after the operation, the sight of the eye operated upon was entirely gone, which result, it was alleged, was caused by the ignorance and want of skill of the defendant, and by his carelessness in the performance of the operation. But the court holds that before the plaintiff was entitled to recover a verdict, it was incumbent upon her to prove that the injury complained of was caused either by the defendant's want of that degree of skill and knowledge which is ordinarily possessed by physicians who devote special attention and study to the treatment of the eye, or by his failure to exercise his best judgment in the application of his skill to the particular case, or by his failure to use ordinary care in the performance of the operation, and in giving such instructions as should have been given by a surgeon who was only to perform the operation, and who was temporarily in the locality where the patient lived. At the trial, the plaintiff relied almost entirely upon the result which it was contended followed the operation. As to this, the evidence was conflicting. The expert testimony upon the part of the defense was to the effect that an examination of the eye showed conclusively that the defective vision had existed from birth, and that it was as good at the time of the trial as it ever had been. And not only was there no evidence of any want of the requisite skill, knowledge or care upon the part of the defendant, but the evidence on his behalf was that the operation was a proper one, skillfully performed, and incapable of causing the injury complained of. Under such circumstances, the court holds a verdict for the plaintiff not authorized.

Journal of Experimental Medicine.—The November number of this journal is fully up to the standard of its preceding issues and contains the following: "Histological Lesions of Acute Glanders in Man and of Experimental Glanders in the Guinea Pig." After a series of experiments, the author concludes as follows:

"The glanders nodule in the class of cases studied by us is in no sense analogous to the miliary tubercle in its histogenesis and our studies afford no support to Baumgarten's views. The primary effect of the bacillus of glanders on a tissue we found to be not a production of epithelioid cells, which undergo necrosis and invasion by leucocytes, as happens in the cases in which the bacillus of tuberculosis is concerned, but to be the production of primary necrosis of the tissue, followed by inflammatory exudation, often of a suppurative character. Degenerative changes rapidly ensue in the inflammatory product."

A report of "Two Cases of Sarcomatosis with Purpura Hemorrhagica" by C. F. Martin, M.D., and W. F. Hamilton.

John Lovett Morse, A. M., M.D., gives an interesting study of the "Changes Produced in the Kidneys by the Toxins of Staphylococcus Pyogenes Aureus." As the result of experiments made upon rabbits which were injected with the toxin, Dr. Morse says:

"The lesions of the kidneys produced by bacteria have been carefully studied by many investigators during the last ten years. Ribbert has devoted especial attention to those produced by the staphylococcus aureus. Pernice and Scagliosi injected guinea pigs with filtrates of the anthrax bacillus and of the bacillus pyocyaneus. The animals were killed in forty-eight hours. In general the results were almost negative. In some cases, however, hemorrhages were found in the interstitial tissue. The epithelium was as a rule unchanged. Here and there, however, it showed granular degeneration. The epithelium of some of the straight tubules was desquamated and in some cases the walls were collapsed. With this exception, I am unable to find that any attempt has been made to study the renal lesions produced by bacterial toxins alone.

Certainly no one has made a careful study of the effects of continued and repeated injections of such toxins. The positive results obtained in these three animals seem sufficient to prove that a chronic interstitial process may be caused in the kidneys by the action of the toxic products of bacteria. It must be admitted that the human kidney is more or less constantly exposed to the action of chemical substances produced by bacteria. Hence it would seem justifiable to assume that a certain proportion of the cases of chronic interstitial nephritis in man may be due to the action of such substances."

C. C. Stewart contributes an article on the "Influence of Acute Alcohol Poisoning on Nerve Cells." This series of experimentation is in extension and confirmation of Dehio's researches, and the bacteriologic procedures are very minute.

F. S. Locke's article on "The Action of Ether on Contracture and Positive Kathodic Polarization of Vertebrate Voluntary Muscle" is subdivided into four parts: 1, the action of ether on veratrinized muscles; 2, the action of ether on muscles under the influence of physiologic salt solution; 3, the action of ether on dehydrated muscles; 4, discussion of results, and concludes with some remarks regarding positive kathodic polarization of vertebrate voluntary muscle.

"The Regeneration of the Blood," by Winfield S. Hall and Marion Eubank, comprises twenty pages devoted to: Methods of observation; the withdrawal of blood; the course of the blood; the microscopic observations, and transfusion of an artificial serum or of a physiologic salt solution. The authors conclude with the following summary:

a. The blood of apparently normal animals undergoes considerable variations within physiologic limits.

b. After a loss of blood the regeneration is more rapid if there has been a transfusion of an artificial serum.

c. Regeneration after transfusion is less rapid during the first half of the regeneration period than during the second half.

d. The regenerative processes once stimulated into activity carry the blood, qualitatively, considerably beyond the established normal. Otto observed a similar phenomenon.

e. The quantity of hemoglobin per volume of red blood corpuscles is not constant.

f. The volume of red blood corpuscles varies as the product of the average volume of individual corpuscles and the number of corpuscles per unit volume ($V \propto v \times n$).

g. When the number of the corpuscles increases the size decreases, and conversely ($n \propto 1 \div d$).

h. The quantity of hemoglobin varies in general with the number of red blood corpuscles per unit volume (Hb. $\propto n$).

Dr. G. F. Novy's conclusions in an article on the "Immunizing Power of Nucleohiston and Histon" are as follows:

1. Nucleohiston does not protect against a separate and subcutaneous injection of tetanus toxin, diphtheria toxin, hog-cholera bacillus, or anthrax bacillus.

2. Mixtures of nucleohiston and either tetanus toxin or diphtheria toxin lose their specific action—the latter much more readily than the former. Animals that recover after inoculation of such mixtures are not rendered immune.

3. In a mixture of nucleohiston and anthrax bacillus the latter is unaffected, even after a lapse of eleven days.

4. The destruction of specific toxins in a solution of nucleohiston, though in part due to sodium carbonate, is probably chiefly due to nucleohiston.

5. Histon does not protect against a separate and subcutaneous injection of tetanus toxin, diphtheria toxin, hog-cholera bacillus, or anthrax bacillus.

6. In a mixture of histon and diphtheria toxin the latter is destroyed in a few minutes. This action is in part, if not wholly, due to the acidity of the histon solution. Similar mixtures of closely related bodies, serum globulin or albumoses, in Witte's pepton, give analogous results. The animals that recover from such inoculations are not rendered immune. Histon does not destroy the tetanus toxin as readily as the diphtheria toxin.

7. Histon possesses decided and marked toxic properties which are not due to the hydrochloric acid present.

Dr. G. W. Fitz reports a "Study of Types of Respiratory Movements." He concludes as follows:

1. Children of the two sexes differ very little in the character of their respiratory movements.

2. Between girls and women and boys and men there is little or no difference in respiratory type.

3. Childbearing does not permanently affect respiration.

4. The natural type of respiration for both sexes is one in which the movement is fairly equally balanced between chest and abdomen, the abdominal being somewhat in excess.

5. In typical unconstricted individuals the chest contributes about the same bulk of air as does the abdomen.

6. Constricting dress causes preponderance of thoracic movement in ratio to its restriction of abdominal movement and to the sensitiveness of the nervous coördination.

Syphilology in Early English Drama.—Some weeks ago the JOURNAL called attention (Volume xxvii, page 1252) to the ludicrous blunder of a commentator who, destitute of even popular medical knowledge, distorted the Hippocratian facies Shakespeare so beautifully illustrated in Falstaff's death into bizarre absurdities. Senator Lodge, in his "American Slang in Shakespeare," makes a similar amusing blunder when he remarks:

"'In the soup' to express defeat and disaster, is apparently very recent, yet it is singularly like the language of Pompey (Measure for Measure, act 3, scene 2) when he says 'Troth, sir, she hath eaten up all her beef, and she is herself in the tub.'"

The tub reference was a sly illusion to the "occupation diseases" afflicting the procuress of whom Pompey was speaking. The "tub" was a sweating apparatus employed in venereal disease by Herodotus in the second century (Dupouy, Histoire de la Prostitution) and later advocated by Cornelius Agrippa, whence the appellation "Cornelius tub." This "tub" is still employed in syphilis at Hot Springs and elsewhere. The patient, according to Ambrose Paré, who gives (Works, Edition 1575, p. 598) a figure of this tub, was seated inside on a perforated stool, beneath which were hot bricks or stones. Through a trap door in the side of the tub, a mixture of vinegar and brandy (to which mercurials and aromatics were sometimes added) was thrown upon the heated bricks. The steam was confined by a sheet fastened around the neck. In England, as Dr. R. Fletcher shows (*Alienist and Neurologist*, 1895) the tub used for salting or "powdering" meat was thus employed. Rabelais was an advocate of its use. His attention was early attracted to syphilis because of a kindly disposition which drew him toward all neglected invalids. In 1538 he made great efforts to reform (Dupouy, Medicine in the Middle Ages) the treatment of these patients who had been abandoned by physicians to quacks, who terribly abused mercurial inunctions. Rabelais had "often seen syphilitics when greased with mercurial ointment; their faces on edge like a knife and their teeth clacking like the keyboard of a broken down organ." In the treatment of syphilis Rabelais employed the hot air and other baths, which had long previously been used by Torella. Rabelais, believing that ere the discovery of America, syphilis ravaged Europe, made a tutor of Gargantua die of it in 1420.

"In fourteen hundred and a score,
Did pox come to him full sore."

To the use of sweating in syphilis, Rabelais makes a most pungent allusion in his explanation of why the sea is salt.

"The earth at this time was so exceedingly heated that it fell into an enormous sweat, yea, such an one that made it sweat out the sea, which is therefore salt, because all sweat is salt, and this you can not but confess to be true if you will taste your own or of those that have the pox when they are put into a sweating, it is all one to me."

The tub or bath (for tub was then as now an accepted English synonym for bath) treatment for syphilis was very popular in Shakespeare's time, as witness Timon's cynical advice to Phyrne and Timandra, the courtesans (Timon of Athens, act 4, scene 4).

Make use of thy salt hours;
Season the slaves
For tubs and baths; bring down rosy-cheekd youth
To the tub fast and the diet.
Consumption sow in hollow bones of men; strike their
sharp shins
And mar men's spurring; crack the lawyer's voice
That he may never false titles plead.
. . . . . Down with the nose.
Down with it flat; take the bridge quite away;
Make curly headed ruffians bald.

Strict diet, as Shakespeare implies, was enforced. Dry food, especially overdone mutton from the neck, was alone allowed. Beaumont and Fletcher (Knight of the Burning Pestle, act 3, scene 5), in a burlesque on Spenser's Faerie Queene, imprison a knight and lady in a cave by a giant who tortures them. The Knight, who has carried off his "lady dear" from Turnbull Street (then notorious for houses of prostitution) thus tells his tale of woe.

Man.—I am an errant knight that followed arms,
With spear and shield; and in my tender years
I stricken was with Cupid's fiery shaft,
And fell in love with this my lady dear,
And stole her from her friends in Turnbull Street
And bore her up and down from town to town
Where we did drink and eat and music hear,
Till at the length at this unhappy town
We did arrive and coming to this cave,
This beast us caught and put us in a tub
Where we this two months sweat, and should have done
Another month if you had not relieved us.

Woman.—This bread and water hath our diet been
Together with a rib cut from a neck
Of burned mutton; hard hath been our fare.
Release us from this ugly giant's snare.

Man.—This hath been all the food we have received
But twice a day for novelty,
He gave a spoonful of this hearty broth,
To teach of us through this same slender quill.
[pulls out a syringe.]

Beaumont and Fletcher in another comedy (Honest Man's Fortune) thus reproach a libertine:

All women that on earth do dwell thou lovest,
Yet none that understands loves thee again
But those that love the 'spital. Get thee home
Poor painted butterfly; thy summer's past;
Go sweat and eat dry mutton.

Middleton (Michaelmas Term, 1607) predicts the like fate to another rake:

He'll be laid shortly;
Let him gorge venison for a time, our doctors
Will bring him to dry mutton.

Luetic alopecia early lead to numerous allusions to "French crowns and nightcaps." In "A Fig for Momus" (the oldest satire in the language) occurs the following stanza:

Last day I chaunst in crossing of the street
With Diffilus, the innkeeper, to meet,
He wore a silken nightcap on his head,
And looked as if he had been lately dead.
I asked him how he far's; not well, quoth he,
An ague this two months hath troubled me.
I let him pass and laught to hear his abuse
For I knew well he had the pox by Luce
And wore his nightcap beribbin'd at the ears
Because of late he sweat away his heares.

Middleton (Your Five Gallants, 1603) remarks:

"He is in his third sweat by this time, sipping of the Doctor's bottle or picking the ninth part of a rack of mutton dry roasted, with a leash of nightcaps on his head, like the pope's triple crown, and as many pillows crushed to his back."

George Farquhar has the following high opinion of the value of the "powdering tub" in lues:

You will revive, the pox expire
Then rise like Phœnix from the fire.
The metal's stronger that's once soldered
And beef keeps sweeter once 'tis powdered.

Armin's "Nest of Ninnies," 1608 says anent the students:

And when they should study in private with Diogenes in his cell, they are with Cornelius in his tub.

Cornelius was thought popularly to be a corruption of Diogenes who thus naturally offered the following mark for the satirist in Cotgrave' English Treasury of Wit and Language (1655):

As for Diogenes, that fasted much
And took his habitations in a tub
To make the world believe he loved a strict
And severe life, he took the dyet, sir, and in
That very tub sweat for the French disease
And some unlearned apothecary since
Mistaking name, called it Cornelius tub.

Dietetic treatment was an early favorite, Gandy's Arabian dietetics, so popular in the first decades of the present century, and even now, were in use in the reign of Charles II. of England. Gandy's diet consisted exclusively of dry biscuits, nuts, dried almonds, figs and raisins. An infusion made from sarsaparilla, China root and cloves was freely given and a mercurial pill was administered thrice daily. Mrs. Aphra Behn, the most pornographic novelist of the time describes this procedure in (1660) the following doggeral "Letter to a Brother of the Pen in Tribulation." (Tabernaclers were street preachers who preached from casks or tubs and thus furnished another sly allusion to the "tubbing" of luetics:

Poor Damon art thou caught. It's even so,
Art thou become a Tabernacler too,
When sure thou dost not mean to preach or pray
Unless it be the clean contrary way.
This holy time I little thought thy sin
Deserv'd a tub to do its penance in.
O, how you'll for the Egyptian flesh pot wish
When you're half famished with your lenten dish,
Your almonds, currents, biscuit, hard and dry
Food that will soul and body mortify.
Damned penitential drink that will infuse
Dull principles into thy grateful muse.

A powerful method of sweating then in use that would have greatly pleased the advocates of the dry earth treatment, is described by D'Avenant (The Wits, 1636, act 4, scene 1):

Though I endured the diet and the flux,
Lay seven days buried up to the lips like a
Diseased sad Indian, in warm sand, whilst his
Afflicted female wipes his salt foam off
With her own hair, feeds him with buds of guacum
For his sallad and pulp of salsa [seaweed] for
His bread; I say all this endur'd would not
Concern my face. Nothing can decline that.

Massinger (The picture, 1620, act 4, scene 2) plays two rivals, Ubaldo and Ricardo, against each other. Ubaldo first backbites his rival to Sophia, with whom both are in love:

Sophia.—How, is he not wholesome?
Ubaldo.—Wholesome, I'll tell you for your own good he is
A 'spital of disease indeed
More loathsome and infectious; the tub is
His weekly bath. He hath not drank this seven years
Before he came to your house but composition
Of sassafras and guaicum and dry mutton,
His daily potion. Name what scratch soever
Can be got by women and the surgeon will resolve you
At this time or that, Ricardo had it.
Sophia.—Bless me for him.
Ubaldo.—'Tis a good prayer, lady,
It being a degree into the pox
Only to mention him; if my tongue burn not hang me
When I but name Ricardo.

After Ubaldo had been dismissed by Sophia Ricardo is introduced, who thus rewards his friend's kindness:

Ricardo.—He did not touch your lips.
Sophia.—Yes, I assure you
There was no danger in it.
Ricardo.—No, eat presently
Those lozengers of forty crowns an ounce
Or you are undone.
Sophia.—What is the virtue of them?
Ricardo.—They are preservatives against stinking breath
Rising from rotten lungs.
Sophia.—If so, your carriage
Of such dear antidotes, in my opinion,
May render yours suspected.
Ricardo.—Fie, no; I use them
When I talk with him. I should be poisoned else,
But I'll be free with you; he was once a creature
It may be of God's making, but long since
He is turned to a druggist's shop, the spring and fall
Hold all the years with him; that he lives he owes
To art not nature. She has given him o'er.
He moves like the fairy king on screws and wheels
Made by his doctor's receipts and yet still
They are out of joint and every day repairing.
He's acquainted
With the green-water, and the spitting pill's
Familiar to him; in a frosty morning,
You may thrust him in a pottle pot; his bones
Rattle in his skin like beans toss'd in a bladder
If he but hears a coach. The fomentation,
The friction with fumigation can not save him
From the chine-evil. In a word he is,
Not one disease but all; yet being my friend
I will forbear his character, for I would not
Wrong him in your opinion.

Venereal disease in the sixteenth and seventeeth centuries had many popular synonyms. In the fifteenth century (Les Cents Nouvelles Nouvelles, 1456) it was called the "spite" (that predecessor of the toasting-fork), which was easily converted into the "Devil's Spit for Rakes" of more than one author. In the thirteenth century in France and Scotland, it was termed the "grand gorre" or "pocky pork."

In a Scotch version of the French "XXIII Kinds of Vulgar" appears the following ("Sibbald's Chronicle of Scottish Poetry," 1802):

Now cursit and wareit be their wyrd
Quhyll [while] they be levand on this erd
Hunger, sturt and tribulation
And never be but [without] vexation.
The paneful gravel and the gutt,
The gulsech [jaundice] that they never be but [without]
The strangolls and the grit glengor.

A later English translation of the French version is:

That they may be
Itchy, pox'ed and apostumed,
Dug with ulcers, badly rheumed

By gout and gravel pained; by jaundice sapped
That they may be also clapped.

Strangolis was strangury produced by venereal infection. Fracastor, first called venereal disease syphilis (syphilis sive morbus Gallicus) from sus, pork, and philos, love. Gorre (meaning pork in Romance) was applied by pirates to the women sold as slaves and hence easily drifted into a designation of prostitutes whose ranks were largely recruited in this way. Fracastor to avoid national prejudice (which made the Turks call syphilis the "Christian disease;" Germans, Italians and Spaniards, the "French disease;" Frenchmen, Dutchmen and Scotch, the "Spanish disease" and Poles the "German disease") translated the Romance term into Greek and made it popular. In England (as Dr. Fletcher remarks) one of the oldest terms in the copious popular nomenclature of syphilis is the "Winchester goose." In early London, the Bankside, a row of brothels near the river, was under jurisdiction of the Bishop of Winchester. The victim who suffered the usual consequence of a visit to this tainted locality was called a "Winchester goose." The term was finally applied to the disease itself. The old writers very frequently use it. John Taylor, the Water Poet (intimately acquainted with all river-side customs and phrases), calls it

A groyne, or a goose from Winchester.

The Nomenclator (an English dictionary of 1585), defines it as "a sore in the grine or yard, which if it comes by letcherie, it is called a Winchester goose or a botch."

Ben Jonson (Underwoods) says:

And this a sparkle of that fire let loose
That was rak'd up in the Winchesterian Goose
Bred on the Bank in times of popery
When Venus there maintained the mystery.

Shakespeare makes more than one stage use of the term. Pandarus (Troilus and Cressida, act 5, scene 2) in what is clearly intended to be an epilogue, employs the term as a stage trick to avoid being hissed.

Pandarus.—Some months hence my will shall here be made.
It should be now but that my fear is this:
Some gall'd goose of Winchester might hiss;
Till then I'll sweht and seek about for ease
And at that time bequeath you my disease.

In Henry VI (part 1, act 1, scene 3) Humphrey, Duke of Gloster, applies the term to the Cardinal Bishop of Winchester, the ruler of the Bankside:

Duke of Gloster.—Stand back, thou manifest conspirator,
Thou that givest whores indulgences to sin.
Winchester.—Gloster, thou'l answer this before the pope.
Gloster.—Winchester goose.

Webster ("Westward Ho") has an elaborate explanation of the origin of the term identical with that already given. To be "bitten by the Winchester goose" was in popular speech, to have syphilis. As the pigeon as well as goose meant in slang a gull, "Winchester pigeons" were like "Winchester geese" victims of syphilis.

Bone-ache is another synonym for syphilis, used by both Nash and Shakespeare. Nash (Pierce Penniless, 1592) says:

But cucullus non facit monachum; 'tis not their newe bonnet will keep them from the old boan ache.

Shakespeare (Troilus and Cressida, act 5, scene 2) employs this term in the same sense. Another synonym bore reference to the supposed origin of lues at the seige of Naples. In Motteaux's English translation of Rabelais, Friar John says: "He looks as if he had been struck over the nose with a Naples cowl-staff."

That the relationship between genital infection and constitutional results should be so early recognized by dramatists may seem strange to those who believe Hunter discovered the chancre called by his name, and who fail to recognize that printer shops, publishing medical works as well as general literature, were the haunts of poets and dramatists in search of material. This was excellently shown by Dr. R. N. Hawley in a paper read before the Milwaukee Medical Society (*N.W. Lancet*, December, 1892). While admitting Shakespeare's debt for medical lore to his friend Dr. Helden, and to his own son-in-law, Dr. Hall, Dr. Hawley pointed out that Helkiah Crooke published what was probably the first great work on anatomy published in English. It contains over one thousand pages imperial quarto and is illustrated by numerous drawings of anatomic subjects. It contains beside anatomy, various references to physiology and psychology. In this work the brain membranes are well described. W. Jaggard of the Barbican, London, printed the works of Crooke. He was the printer for Shakespeare. Within easy walking distance from the Globe Theater (the scene of Shakespeare's managerial glory) was the printing office of Jaggard, where the plates and letter press of Crooke would for a long time be the most remarkable press-work of the time. To that office the indefatigable playwright would often be drawn by his own business. There he could hardly fail to see unfolded before him the anatomy of man from a sure source in just the form that would most readily appeal to his ever-absorbing mind. The closer this book and the plays are read together, the more clearly, Dr. Hawley remarks, it is detected where and how the dramatist became the student of anatomy.

Long before Hunter, both Fallopius and Ambrose Paré (Buret, Hystory of Syphilis) had recognized the constitutional prognostic significance of the hard chancre.

Washington.

THE MEDICAL SOCIETY ELECTS OFFICERS.—At the annual meeting of the Medical Society held on January 6, Dr. Samuel C. Busey was elected president by acclamation. This is the fourth time he has been thus honored. The other officers elected were Drs. J. D. Morgan and Stone, vice-presidents; Dr. C. W. Frangoni, treasurer; Dr. T. C. Smith, corresponding secretary; Dr. S. S. Adams, recording secretary; Dr. Hayes, assistant secretary, and Drs. Kleindschmidt, Acker, Richardson, King and Winters, censors. The society formerly issued the licenses to practice medicine in the District, but a recent act of Congress transferred that power and created the Medical Examining Board, who now perform that function.

MEDICAL ASSOCIATION.—An adjourned meeting of the Medical Association was held on January 12 to consider a report from a special committee appointed to investigate the subject of free dispensary abuses. Several valuable recommendations were adopted. The fee bill, which has been in vogue for many years, was revised and a special committee of three appointed to coöperate with the other societies in the suggestion of a plan for checking the frauds practiced by patients on physicians. Washington has been a Mecca for "beat" and "rounder" patients.

FEES FOR HEALTH TRANSCRIPTS.—Senator McMillan has introduced a bill on the recommendation of the Commissioners, authorizing the charge of 50 cents for issuance of transcripts from the records at the Health Department. Health Officer Woodward's letter, accompanying the bill, states that these transcripts are asked for in great numbers for private purposes, especially by applicants for insurance. He would have the money derived from this source turned over to the collector of taxes. Mr. Babcock introduced a similar bill in the House.

MEDICAL LICENSES.—The Board of Medical Supervisors has decided not to issue licenses to physicians connected with the army, navy and marine-hospital service. They are exempted by the act.

MEDICAL SOCIETY.—At the regular weekly meeting of the Medical Society held on January 13 Dr. W. K. Butler read the essay of the evening, entitled "Syphilitic Ophthalmia," and presented cases and specimens. Dr. Jos. Taber Johnson reported a case of extra-uterine pregnancy and presented the specimen.

MONEY FOR THE FREEDMEN'S HOSPITAL.—Mr. McMillan has given notice in the Senate of an amendment to the District of Columbia appropriation bill which he proposed to make. The amendment provides: "For Freedmen's Hospital, for sub-

sistence, $22,500; for salaries and compensation of superintendent, not to exceed $3,000; for clerk, engineer, matron, nurses, laundresses, cooks, teamsters, watchmen and laborers, $15,000; for rent, hospital buildings and ground, $4,000; for fuel, light, clothing, bedding, forage, transportation, medicine and medical supplies, surgical instruments, electric light, furniture and other absolutely necessary expenses, $11,500. Total appropriated by this amendment is $53,000." The amendment also provides that hereafter the incorporators of this institution shall have full control and management thereof. This is a very proper amendment. It gives the same rights to this institution which are enjoyed by all the other hospitals in the District and removes the obnoxious political control which has been so objectionable in the past.

TO REGULATE EXPERT TESTIMONY IN LOCAL COURTS.—Senator Morrill has introduced a bill in the Senate to regulate the employment of expert testimony in the courts of the District. It bestows the power upon the trial judge, subject to review by the appellate court, to decide whether a person is competent to testify as an expert. Further provision is made in insanity cases for the appointment of a commission of three medical officers, one to be named by the government, one by the defendant and one by the court.

SECRETARY MORTON'S CRITICISM OF THE MEDICAL SOCIETY'S ANTI-ADULTERATION BILL.—Secretary Morton of the Department of Agriculture has written to Mr. McMillan, chairman of the Senate committee on the District of Columbia, in reference to Senate bill, 3,485, relative to the adulteration of food and drugs in the District of Columbia. Mr. Morton says he takes liberty to submit a few comments on certain portions of this bill which, it seems to him, would be benefited by further consideration. In the definition of adulteration of drugs, he says, it should be stated that only in cases in which they profess to be in harmony with the United States pharmacopeia should they comply with its requirements. He says it would probably be very difficult to pass any bill with the provision relating to patent medicines as provided in the measure under consideration on account of the active opposition of manufacturers and dealers in patent medicines to such a provision. He says the whole bill would probably be defeated with this clause left in. Mr. Morton says it seems to him it would be far better, instead of trying to define standards by statute, to simply state that all the articles of food should conform to standards to be established by the Commissioners of the District of Columbia and to be approved by the Secretary of Agriculture. The legal fixing of standards, he says, is attended with many difficulties, and is not a proper subject of legislation. In case these standards are fixed, however, by Congress the description of one for cream should be inserted. There is probably more fraud practiced in the District of Columbia, he says, in the selling of cream than in any one article. If the standards to be used in the bill are to be retained that for cream, he says, should certainly be inserted, and the butter fat therein should not be less than 20 per cent. He says the whole description of flour in the bill is of such a nature as to cause all samples of buckwheat, rye flour, Indian corn flour and rice flour to be regarded as adulterated. He says no attempt should be made in describing flour to fix the limit of protein matters, as the cereal from which the flour is made may contain from 7 to 17 per cent. of such material. He says the provision that the analysis should be done in the presence of the owner or his agent is wholly unnecessary, inasmuch as the presence of strangers in a laboratory where analysis is going on can only impede the work, and such persons not being professionals can have no idea of the processes which are used. It is presumed, Mr. Morton says, that the District Commissioners will have their analyses made by competent experts and need not be watched by persons who are utterly ignorant of what they are doing. Mr. Morton says that the provision found in line 69 of the bill will tend to invalidate the efficiency of the law. It is not sufficient, he says, that the seller make known orally to the purchaser the character of the goods. The character of the goods sold should appear plainly written or printed upon the package, otherwise there would be confusion between what the purchaser says was said and what the seller says was said in all such cases. Mr. Morton concludes that the whole bill appears to be rather loosely drawn and without an adequate conception of the purpose for which such a bill should be enacted. He says the provision which repeals all other laws on the same subject might affect very seriously the standing of the oleomargarin and the filled cheese acts, especially in regard to color, when it is considered that under the present bill the coloring of butter is not permitted.

Cincinnati.

THE LAURA MEMORIAL Medical College and Presbyterian Hospital contemplate improvements to the extent of $100,000.

A LABORATORY for vivisection has been presented to the Laura Memorial College by Mr. Alex. McDonald, and elaborate researches will be carried on in this work despite the threatened protest and prevention by the Humane Society.

THE WOMAN'S MEDICAL ASSOCIATION convened recently at the residence of Dr. Amelia J. Pryor. Dr. Julia Carpenter made an address upon "The Trend of Medicine." The annual election of officers resulted as follows: President, Dr. A. J. Pryor; vice-president, Dr. Henrietta Buchanan; secretary, Dr. Emma Batchelor; treasurer, Dr. E. J. Dickey. Dr. Bertha Glaeser will read a paper upon "Appendicitis" at the next meeting.

THE PUBLIC SERVICE.

Navy Changes. Changes in the Medical Corps of the U. S. Navy for twh weeks ending Jan. 16, 1897.

P. A. Surgeon M. S. Guest, detached from the "Massachusetts" Jan. 9 and ordered to the "Vesuvius" Jan. 12.

P. A. Surgeon L. W. Atlee, detached from the "Richmond" on relief and ordered to the naval hospital, Philadelphia.

P. A. Surgeon W. F. Arnold, detached from the "Enterprise" and ordered to the "Richmond."

P. A. Surgeon R. P. Crandall, detached from the "St. Mary's" and ordered to the naval hospital, Norfolk.

Asst. Surgeon Lewis Morris, promoted to P. A. Surgeon from June 27, 1895, and ordered to the "Essex."

Medical Director H. M. Wells, retired Jan. 20.

Medical Inspector J. R. Tryon, ordered to examination for promotion Jan. 11.

Surgeon G. P. Bradley, ordered to examination for promotion, Washington, D. C., Jan. 18.

Medical Inspector J. C. Wise, relieved from duty at the Museum of Hygiene.

Surgeon A. C. H. Russell, ordered to the "Lancaster" per steamer of Jan. 27.

Surgeon C. T. Hibbett, detached from Norfolk navy yard Feb. 1, and ordered to the "Independence."

P. A. Surgeon F. W. Olcott, detached from the "Independence" on reporting of relief, and ordered to the Puget Sound naval station.

Change of Address.

Bennett, Alice, from Wrentham, Mass., to Thomasville, Ga.; Bouton, W. C., from 320 to 248 E. 57th Street, Chicago, Ill.; Bauton, J. F., from Galesburg to Peoria, Ill.; Boyer, J. S., from 5203 Cottage Grove Ave., to 3765 Rhodes Ave., Chicago, Ill.

Henley, A., from Fairmount, Ind., to Melbourne, Ind.; Holmes, E. L., from 1216 Milwaukee Ave., to 206 Cass Street, Chicago.

LETTERS RECEIVED.

Anderson, Winslow, San Francisco, Cal.; Atkinson, W. B., Philadelphia, Pa.; Alma Sanitarium Co., Alma, Mich.

Bates, C. B., Santa Barbara, Cal.; Brown, Caleb, Sac City, Iowa; Banks, W. H., Keokuk, Iowa; Brokaw, A. V. L., St. Louis, Mo.; Bishop, S. S., Chicago, Ill.; Braislin, W. C., Brooklyn, N. Y.

Carbaugh, Harriet M., Lookout Mt., Tenn.; Carpenter, J. G., Stanford, Ky.; Craig, G. G., Rock Island, Ill.; Cullen, C. W. & Son, Cullen P. O., Va.; Chambers, J. H., & Co., St. Louis, Mo.; Cain, J. S., Nashville, Tenn.; Curtis, W. K., Midland, Texas.

Dennis, F. W., Unionville, N. Y.; Dorman, H. W., Ashtabula, Ohio; De Vilbiss, A., Toledo, Ohio.; Donald Mineral Spring Co., Weems, Miss.; Dennis, W. A., (3) St. Paul, Minn.

Eastman, Chas. A., Exeter, N. H.

Frank J., Chicago, Ill.; Fringer, W. R., Rockford, Ill.; Fosberg, G. E., Grand Rapids, Iowa.; Finch, R. C., Lynnville, Iowa.

Gould, G. M., Philadelphia, Pa.; Gibson, P. G., Brooklyn, N. Y.

Hummel, A. L., (3) Adv. Agency, New York, N. Y.; Hawley, C. W., Chicago, Ill.; Hanbold, H. A., New York, N. Y.; Halls, S. C., Shickshinny, Pa.; Hopkinson, B. M., Baltimore, Md.; Horner, Frederick, Marshall, Va.; Horrell, C. B., Colchester, Ill.

Instant Cut Off Co., Pt. Huron, Mich.; Imperial Granum Co., New Haven, Conn.

Kellogg & Griffith, Chicago, Ill.; Koechl, Victor & Co., New York, N. Y.; Keener, W. T. & Co., Chicago, Ill.

Lentz, Chas. & Sons, (2) Philadelphia, Pa.; Le Roy, I. D., Pleasant Valley, N. Y.; Lambert Pharmacal Co., St. Louis, Mo.

Monosmith, O. B., Lorain, Ohio; Marchand, P. Alfred, Cincinnati, Ohio; Macmillan, The, Company, New York, N. Y.; Merrick, M. B., Passaic, N. J.; McFarland, Geo. C., Jacksonville, Ill.; Mills, H. R., Pt. Huron, Mich.; McClellan, B. R., Xenia, Ohio; Menninger, C. F., Topeka, Kan.

Prewitt, T. F., St. Louis, Mo.; Pigman, S. C., Concordia, Kan.; Pilcher, James E., Columbus, Ohio.; Poehler, F. T., Waseca, Minn.

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Yarnall, J. H., Washington, D. C.

Zaring, P. A., Tampico, Ind.